BASE PROJECT (VOL. 3)
SECONDARY DATA ANALYSIS

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Helping the most vulnerable out of the poverty trap and reducing inequality: Policies, strategies, and services for individuals with Autism Spectrum Disorder, including intellectual and neurodevelopmental disabilities

(Working title: Benchmarking Autism Services Efficacy: BASE Project)

The BASE project aimed to provide baseline data for individuals with autism against which the effect of the Autism Act (NI) 2011 and associated Autism Spectrum Disorder (ASD) strategy can be measured. The five integrated Volumes of this project include

Volume 1: Comprehensive literature review using a systematic approach on outcomes for individuals with autism and the policies designed to improve those outcomes;

Volume 2: Northern Ireland Life and Times (NILT) Survey Autism module to survey public attitudes, knowledge and awareness of autism (n=1200); and

Volume 3. Secondary data analysis of all relevant NI governmental and related departmental etc. datasets focussing on education, employment and poverty;

Volume 4. Qualitative study using interviews and focus groups with individuals affected by autism and key professionals (e.g. educationists, employers, policy makers).

Volume 5. Final project report to funder including process and outcome record of the BASE Project.

This report (Volume 3) represents the Secondary Data analysis of all relevant NI governmental and related departmental etc. datasets focussing on education, employment and poverty. The research reported here is in line with guidance from the United Nations General Assembly (2012) that encourages Member States to 'undertake to collect appropriate information, including disaggregated statistical and research data, on ASD, developmental disability (DD) and associated disabilities" (p.3)

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Abbreviations

AWA	Adult with Autism Spectrum Disorder
AOA	Adult without Autism Spectrum Disorder
ASD	Autism Spectrum Disorder
CWA	Child with Autism Spectrum Disorder
COA	Child without Autism Spectrum Disorder
DES	Disability Employment Service
MCS	Millennium Cohort Study
MEHS	Multiple Exclusion Homelessness Survey
NILT	Northern Ireland Life and Times
SWA	Student with Autism Spectrum Disorder
SOA	Student without Autism Spectrum Disorder
YPBAS	Young Persons' Behaviour and Attitudes Survey

1) Executive Summary

Legislation (Autism Act NI, 2011), a cross-departmental strategy (Autism Strategy 2013-2020) and a first action plan (2013-2016) have been developed in Northern Ireland in order to support individuals and families affected by Autism Spectrum Disorder (ASD) without a prior thorough baseline assessment of need. At the same time, there are large existing data sets about the population in NI that had never been subjected to a secondary data analysis with regards to data on ASD. This report covers the first comprehensive secondary data analysis and thereby aims to inform future policy and practice.

Following a search of all existing, large-scale, regional or national data sets that were relevant to the lives of individuals and families affected by Autism Spectrum Disorder (ASD) in Northern Ireland, extensive secondary data analyses were carried out. The focus of these secondary data analyses was to distill any ASD related data from larger generic data sets. The findings are reported for each data set and follow a lifespan perspective, i.e., data related to children is reported first before data related to adults.

Key findings:

Autism Prevalence:

Of children born in 2000 in the UK,

- 0.9% (1:109) were reported to have ASD, when they were 5-year old in 2005;
- 1.8% (1:55) were reported to have ASD, when they were 7-years old in 2007;
- 3.5% (1:29) were reported to have ASD, when they were 11-year old in 2011.

In mainstream schools in Northern Ireland

- 1.2% of the children were reported to have ASD in 2006/07;
- 1.8% of the children were reported to have ASD in 2012/13.

Economic Deprivation:

- Families of children with autism (CWA) were 9%-18% worse off per week than families of children not on the autism spectrum (COA).
- Between 2006-2013 deprivation of CWA compared to COA nearly doubled as measured by eligibility for free school meals (from near 20 % to 37%)

- In 2006, CWA and COA experienced similar levels of deprivation (approx. 20%), by 2013, a considerable deprivation gap had developed, with CWA experienced 6% more deprivation than COA.
- Nearly 1/3 of primary school CWA lived in the most deprived areas in Northern Ireland.
- Nearly ½ of children with Asperger's Syndrome who attended special school lived in the most deprived areas.

Unemployment:

- Mothers of CWA were 6% less likely to be employed than mothers of COA.
- Mothers of CWA earned 35%-56% less than mothers of COA.
- CWA were 9% less likely to live in two income families than COA.

Health:

- Pre-diagnosis, CWA were more likely than COA to have physical health problems, including walking on level ground, speech and language, hearing, eyesight, and asthma.
- Aged 3 years of age CWA experienced poorer emotional and social health than COA, this difference increased significantly by the time they were 7 years of age.
- Mothers of young CWA had lower levels of life satisfaction and poorer mental health than mothers of young COA.

Education:

- In mainstream education, children with ASD aged 11-16 years reported less satisfaction with their social relationships than COA.
- Younger children with ASD (aged 5 and 7 years) were less likely to enjoy school, were bullied more, and were more reluctant to attend school than COA.
- CWA attended school 2-3 weeks less than COA .
- Children with Asperger's Syndrome in special schools missed the equivalent of 8-13 school days more than children with Asperger's Syndrome in mainstream schools.
- Children with ASD attending mainstream schooling were less likely to gain 5+ GCSEs A*-C or subsequently attend university.

Further and Higher Education:

- Enrolment rates for students with ASD have risen in Further Education (FE), from 0% to 0.7%.
- Enrolment rates for students with ASD have risen in Higher Education (HE), from 0.28% to 0.45%.
- Students with ASD chose to study different subjects than students without ASD, although other factors, e.g., gender, age etc. may have played a part in subject selection.
- Students with ASD from NI were more likely than students without ASD to choose Northern Irish HE Institutions rather than study outside NI.

Participation in adult life and employment:

- A small number of adults with ASD (n=99) have benefitted from DES employment provision over the past 12 years.
- It is unknown how many adults with ASD have received employment support elsewhere (e.g. Steps to Work).
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Awareness and Attitudes in the General Population:

- In both the 2003 and 2012 NI Life and Times Survey (NILTS), NI public reported positive attitudes towards the inclusion of children with ASD in mainstream education (see also BASE Project Vol. 2).

Gap Analysis Recommendations:

This was the first comprehensive secondary analysis with regards to ASD of existing large-scale data sets in Northern Ireland. Data gaps were identified and further replications would benefit from the following data inclusion:

- ASD should be recorded routinely in the following datasets:
    - Census;
    - Northern Ireland Survey of Activity Limitation (NISALD);
    - Training for Success/Steps to work; Steps to Success;
    - Travel survey;
    - Hate crime; and
    - Labour Force Survey.

- Data should be collected on the destinations/qualifications of special school leavers.
- NILT Survey autism module should be repeated in 5 years time (2017) (see full report of 1st NILT Survey autism module 2012 in BASE Project Report Volume 2).
- General public attitudes and awareness should be assessed for children and young people, using the Young Life and Times Survey (YLT) and the Kids Life and Times Survey (KLT); (this work is underway, Dillenburger, McKerr, Schubolz, & Lloyd, 2014-2015).

2) Introduction

Legislation (Autism Act NI, 2011), a cross-departmental strategy (Autism Strategy 2013-2020) and a first action plan (2013-2016) have been developed in Northern Ireland in order to support individuals and families affected by Autism Spectrum Disorder (ASD) without a prior thorough baseline assessment of need. At the same time, there are large existing data sets about the population in NI that have never been subjected to a secondary data analysis with regards to data on ASD. This report covers the first such comprehensive secondary data analysis and therefore aims to inform future policy and practice.

Scoping exercise

A scoping exercise was carried out to identify datasets holding information on autism spectrum disorder (ASD[1]) as well as poverty and social exclusion in Northern Ireland.

1) Data sets were identified through liaison with Statistical lead officers in:
   - Office of the First Minister and Deputy First Minister (OFMDFM);
   - Department of Health, Social Services and Public Safety (DHSSPS);
   - Department of Education (DE);
   - Department for Employment and Learning (DEL);
   - Department for Regional Development (DRD);
   - Department of Enterprise, Trade, and Investment (DETI);
   - Department for Social Development (DSD);
   - Business Services Organisation (BSO);
   - Department of Culture, Arts, and Leisure (DCAL);
   - Department of Environment (DOE);
   - Department of Justice (DOJ);
   - Police Service of Northern Ireland (PSNI).

2) Within the Department of Finance and Personnel (DFP), the following branches were contacted:
   - Central Survey Unit (CSU);
   - Regional Reporting and EU Programmes Branch (RREPB);
   - Census;
   - Demography and Methodology Branch (DMB);
   - Human Resource Consultancy Services (HRCS), and
   - General Registrar Office (GRO).

[1] 'ASD' includes the terms 'autism' and 'Asperger's Syndrome' (DSM 5, 2013)

3) Other data sets were searched including:

- DEL Disablement Advisory Service employment programmes and services specifically aimed at helping persons with disabilities.
- The Northern Ireland Social and Political Archive (Access, Research, Knowledge, ARK), and ARK website[2]
- The UK data service website[3]: the 'variable and question bank' for 'autism'.
- Key NI autism/disability charities and organisations, including Children with Disabilities Strategic Alliance, Disability Action, National Autistic Society, Autism NI, Autism Initiatives, Parents' Education as Autism Therapists, Middletown Centre for Autism.
- The Health and Social Care (HSC) Board of NI (for HSC Trust data).

Criteria for selecting datasets

The following inclusion/exclusion criteria were applied. Data sets had to:

a) Contain data on autism, and autism was recorded as part of standard procedures.
b) Hold data in relation to poverty and social exclusion
c) Have sufficient documentation/information available to evaluate the quality of the dataset. Quality criteria included: clearly worded questions; low levels of missing data for each variable analysed; good reliability; data had to pass logic checks (e.g. no values outside predefined scale range). As part of the quality assessment for data acquired from government departments, data were excluded if there were reported quality issues that could affect the analysis. For datasets obtained from the UK data service, quality issues were identified in the documentation that accompanied each dataset. Where data linking was used to merge longitudinal data, the linking variables uniquely identified individuals.
d) Have sufficient sample size to provide enough statistical power to detect a medium effect size (where statistical analysis was needed).
e) Include Northern Ireland data within the dataset
f) Include data from 2003 onwards. Where more recent data existed for a particular aspect of poverty/social inclusion, this was given priority. Potential impact of changes in diagnostic practices/coding frames was made explicit in the report.

[2] http://www.ark.ac.uk
[3] http://discover.ukdataservice.ac.uk/variables

Based on these criteria the following datasets/data sources were selected:

1) Millennium Cohort Study
2) Department of Education Primary, Post-primary and Secondary school data
3) Young Persons' Behaviour and Attitudes Survey 2010
4) Department of Education School Leavers Survey
5) Department for Employment and Learning Further Education data
6) Department for Employment and Learning Higher Education data
7) Department for Employment and Learning Employment Programme data
8) Multiple Exclusion Homelessness Survey 2010
9) Northern Ireland Life and Times Survey 2003, 2012

The results from these datasets are presented in this report in a lifespan perspective, i.e., datasets covering children and adolescents are presented first; adult data are presented subsequently.

Data Gaps were identified and a full discussion of the findings follows the reports in the results sections.

3) Main Findings by Datasets

3.1) Millennium Cohort Study

Introduction

The Millennium Cohort Study (MCS) is a UK wide large-scale longitudinal survey which tracked children born at the start of the Millennium. Funded by the Economic and Social Research Council (ESRC) bi-annual data sweeps were carried out (additional funding was provided by National Evaluation of the Children's Fund to collect data on older siblings and neighbourhood observations in the second survey).

The MCS employed cluster sampling (based on geographical wards) and was disproportionately stratified to over represent smaller countries (e.g. Northern Ireland), ethnic minorities in England, and areas of high child poverty. Child benefit records, and health visitor knowledge were used to identify potential participants. Throughout the report the selected children were referred to as the 'study children'. For the first wave of data collection the overall UK response rate was 68%. Data were available when the children were aged:

9-months **(n=18,522)**
3-years **(n=15,590)**
5-years **(n=15,246)**
7-years **(n=13,857)**
11 years **(n=13,287)**.

It is important here to note that the sample of the MSC was not specifically chosen for ASD related research. On the contrary, this was the first time that all available MCS data sets were analysed in detail with regards to ASD. Previously, MCS data had only been used twice in connection with ASD; first, to measure ASD prevalence when the children were 7 years of age (Russell et al., 2014); and second, to examine emotional/behavioural outcomes for children with ASD and the health of their mothers, when the children were 5 years of age (Totsika et al., 2011).

Throughout the MCS, data were collected on the selected study children and their families using interviews and self-completion questionnaires. In a small number of cases (i.e., cases of twins, triplets) more than one child per household participate in the MCS, however, for the secondary data analysis, we only included the child marked as cohort member number 1 for each household. Further methodological and technical information on the Millennium Cohort Study can be found in the guide to the datasets (Hansen et al., 2012).

MCS data were also available on the child's carers, and at age 3- and 5-years, data existed on the child's older siblings. At each time point a range of poverty and social exclusion related data were included. In addition, when the child was aged 5 years, 7 years, and 11 years of age, the respondent was asked if a professional ever had told them that the child had autism/Asperger's. The questions used to assess aspects of poverty and social exclusion are included in Appendices 1.1-1.26, this excludes Organisation for Economic Co-operation and Development (OECD; Office for National Statistics, 2014) '*equivalised income'* which was derived through mathematical formulas.

The Millennium Cohort Study is based on a large random sample and the focus of the study was on child development in general. Therefore, in contrast to other research on autism where self-selection can be in issue, the findings reported here from the MCS are less likely to be biased.

It is possible that due to delays in diagnosis, a small number of families were classified as not having a child with autism for the purpose of this secondary data analysis, yet the study child may subsequently be diagnosed with autism. It is also possible that a sibling may have a current diagnosis of autism or go on to receive an ASD diagnosis. Sensitivity analysis revealed that including a small number of these cases within the control group had only a very marginal effect on the results, i.e., given the relatively large control group the impact on these data would be minimal.

Key findings

The Millennium Cohort Study (MCS) began with a large cohort of children who were born in 2000. Data were from five data sweeps were available for secondary analysis, the children were aged 9 months, 3; 5; 7; and 11 years of age (for detailed findings see Section 4.1).

The first two data sweeps of the MCS did not include a question about autism. The question about autism was included when the children were 5, 7, and 11 years of age. We were able to analyse the entire 5 MCS data sets for children diagnosed with ASD (CWA) and compare their outcomes with those of children not on the autism spectrum (COA). This offered the unique opportunity to look at pre-diagnosis data prospectively in a general population sample, i.e., a sample that was not selected with a focus on autism.

The data provided by the Millennium Cohort Study (MCS) showed that prevalence of ASD in the UK (including NI) was largely in line with internationally reported prevalence rates (Centers for Disease Control and Prevention, CDC, 2012; 2013) until the children were older than 7 years of age. When children were aged 5 years, 0.9% of the total sample had received a diagnosis of autism; i.e., 1 in every 109. When the children were 7 years old, prevalence of ASD had increased to 1.7%; i.e., 1 in every 59. However, when the children were 11 years of age, the prevalence rate had risen to 3.5%; i.e., 1 in every 29.

While the MCS data for 5 and 7 year old children were consistent with the prevalence rates based on DENI data reported in the next section, by 11 years of age, the prevalence rate had nearly doubled. This is the first time that a prevalence rate of 3.5% has been reported in the UK, it is also the highest prevalence rate reported internationally. Kim, Leventhal, Koh, Fombonne et al., (2011) had reported prevalence rates of up to 2.6% in the total population of South Korea. Two-thirds of their sample attended the mainstream school and were undiagnosed and untreated. Kim et al. concluded, 'These findings suggest that rigorous screening and comprehensive population coverage are necessary to produce more accurate ASD prevalence estimates and underscore the need for better detection, assessment, and services' (p. 904). The MCS offers such screening and a comprehensive population

coverage of the UK, and policy makers and practitioners should heed the results that clearly indicate the urgent need for effective early intervention as well as adult services.

According the MCS data, the behavioural symptoms of ASD were the main reasons for support needs, while the child's learning difficulties caused concern for only about one fifth of the families. This was interesting given that it is generally reported that 50-70% of persons with ASD have co-occurring learning disabilities; yet, according to the secondary data analysis of the MCS, behavioural symptoms associated with ASD evidently caused more concern than co-occurring learning disabilities.

For adults with ASD, whose challenging behaviours have not been addressed in early childhood, a recent study of long-term outcomes paints a depressing picture; 15 of the 60 participants could not be assessed due to severe aggressive or self-injurious behaviours; none of these adults had ever developed language above a 3-year level. For the remaining 45 participants, IQ had remained stable from childhood to adulthood (Howlin, Savage, Moss, Tempier, & Rutter, 2014). Applied behaviour analysis-based interventions were not available to Howlin et al.'s participants in the UK, despite the fact that at the time these adults were young children, ABA-based interventions have been known to improve adaptive and challenging behaviours and IQ significantly (Lovaas, 1987). These interventions are still not routinely available in the UK, while in the USA they are considered 'treatment as usual' (Fein et al., 2013). It is not surprising that ABA-based interventions commonly are the preferred parental choice for treatment (ABA4All, 2014; Freeman, 2007).

With regard to poverty, MCS data revealed that families of CWA had significantly lower incomes (up to 12% lower) and experienced considerably more unemployment (up to 20% more) than families of children without ASD (COA). When parents of CWA left their jobs and became unemployed, this was more frequently due to their child's health problems/disability (in 20% of cases of unemployment) than other reasons.

When all these costs are taken into account the economic effect of ASD on individuals, families, and society as a whole is vast. In the UK, the lifetime 'cost of

autism' for each affected individual lies between £0.9-1.4 million, depending on level of functioning; bringing the total annual cost in the UK to an estimated £32billion per year. Buescher, et al., (2014) explained that '[t]he largest cost components for children were special education services and parental productivity loss. During adulthood, residential care or supportive living accommodation and individual productivity loss contributed the highest costs. Medical costs were much higher for adults than for children.' Knapp (2014) pointed out 'Autism is the most costly medical condition in the UK'

Mothers of COA and mothers of CWA experienced similar levels of life satisfaction before the children were diagnosed, but around the time of diagnosis and thereafter, differences in life satisfaction approached significance. By the time the children were aged 7 years, i.e., by which stage most of these children had received their diagnosis, the mothers of CWA reported significantly lower levels of life satisfaction than the mothers of COA. This was not surprising, given the plethora of research in NI and other regions on parental stress and mental ill-health in families of CWA (e.g. Dillenburger et al. 2010). Evidently, most of this stress was caused by lack of adequate support or having to 'fight the system for parental choice of intervention', rather than the child's diagnosis (ABA4All, 2014; Freeman, 2003; 2007). In fact, there is evidence that even very labour intensive interventions can alleviate stress if they are based on parent-training and collaborative working (Dillenburger et al., 2010).

MCS data offered the unique opportunity to analyse prospective pre-diagnosis data regarding the child's physical health. Children who were later diagnosed with ASD experienced more problems at birth (e.g. breathing difficulty; jaundice) and subsequently more health problems as babies than COA. At 3 years of age significant differences were apparent in all health aspects and especially with motoric difficulties (i.e., walking), speech and language, and hearing, with caregivers of CWA worrying twice as much about the child than carers of COA. By age 7 years the prevalence of ADHD and bedwetting had become major problems amongst CWA.

The Strength and Difficulties Questionnaire (SDQ; Goodman, 1997) revealed a significant and widening gap between the two groups of children and by age 5 years, school had become a problem for CWA when compared to COA; many more CWA

were reluctant to go to school, did not enjoy school, had been bullied several or many times, and spent no time with friends outside school compared to COA. Despite this, parents of CWA generally wanted their child to stay on at school past compulsory school age. These findings reflect results from the Lamb Inquiry (Lamb, 2009; 2010) that showed that parents of children with SEN had little confidence in the school system and were more realistically ambitious for their children than schools staff.

3.2) Schooling for children with ASD

Introduction

The Department of Education Northern Ireland (DENI) collects information about pupils' Special Educational Needs (SEN) and details of their educational need as part of the Annual School Census (DENI, 2012). The following section presents secondary data analysis from seven available Annual School Census data sets, 2006-07 to 2012-2013. DENI were unable to provide data prior to 2006/07, essentially because data were collected in an aggregated format prior to this. Details about other data collected in the School Census are available on the DENI website.

In Northern Ireland, Special Educational Needs (SEN) were assessed in 5 stages; at first (Stages 1 and 2) generic 'types' of needs are identified; in some cases, specific diagnoses, such as autism are not identified until Stages 3 or 4. At Stage 5, a Statement of Special Educational Needs is issued, i.e., colloquially a pupil would be 'statemented'. Not all pupils who were initially assessed ultimately received a Statement of SEN. Further information on special educational needs is available in the Code of Practice (DENI, September 1998).

Annual Schools Censuses were conducted since 2000/01. The details that were recorded with regard to SEN improved over time, e.g., in 2003/04 a maximum of four specific special educational needs were identified per child, while the Census in 2012/13 included a maximum of eight specific SENs per child.

Due to the variability in 'statementing' procedures, DENI data gave an indication, rather than precise figures of SEN prevalence rates for school aged children, e.g., while the school may have recommended a Statement of SEN, the parents of the child

may not have agreed; or the school may have felt that they could manage without extra support and consequently the child did not receive a Statement of SEN. With regard to ASD diagnosis the Census figures may not have been accurate because children were commonly registered under their primary diagnosis (e.g. learning difficulty; LD) and thus children with a dual diagnosis of LD and autism were not registered under autism (Dillenburger & McKerr, 2009).

In sum, the true prevalence rate of autism was likely to be higher as not all children with ASD were captured in the Annual School Censuses. In addition, some data were subject to suppression by DENI, i.e., disclosure control was used on sensitive data. For example, some of the data on school expulsions/suspensions were not disclosed because they did not contain a record of SEN nor the Unique Pupil Number (UPN) that would have allowed for cross referencing with census data. However according to DENI, even if these data were available, the numbers would likely have been too small to draw comparisons, particularly in the case of school expulsions. However, parent reports indicate that special school suspensions and expulsions do occur, either officially or unofficially/ad hoc, much more frequently than previously recorded (Ambitious for Autism, 2014).

This section of the report presents the secondary data analysis of School Censuses since 2006 that were supplied by DENI for this purpose. The analysis focuses on data sets related to children with ASD in primary and post-primary schools, including special schools, and identifies prevalence, attendance, and school selection.

Attendance data were collected by DENI from all grant-aided primary, post-primary and special schools as part of the schools censuses. Attendance was calculated on the basis of 190 statutory school days per year. While schools in Northern Ireland are required to operate for the full 190 days per year, they can apply for up to five so-called School Development Days, when the school closes for staff training. Not all schools avail of School Development Days and therefore the actual number of days that pupils attend varied slightly across schools.

Attendance was measured as number of ‘half days attended’, either morning only attendance (am) or afternoon only attendance (pm) (DENI Attendance Bulletin, 2014).

The attendance figures for primary schools include Years 1-7, while post-primary attendance figures include years 8-12; special school attendance figures include all year groups. Nine local primary schools did not supply data to the censuses either because they had been closed or because they did not collect data on a pupil level. Pupil level information refers to the number of pupil enrolments on a specific cut-off date (i.e., October); NB, enrolments are not the same as attendance because a pupil can move schools during the year and therefore they have an enrolment record in one school and an attendance record at more than one school. Numbers of pupils where this applied were relatively small and therefore did not impact significantly on calculations.

Reasons for non-attendance varied, e.g., a pupil might have been absent for authorised reasons such as illness or medical appointments, bereavement, suspension, agreed family holiday, and religious observance, or more general categories of exceptional circumstances, e.g. court appearance, traveller children.

Unauthorised absence refers to absences where an authorised school representative did not grant permission and the absence remained unexplained or unjustified; this included family holiday not agreed, absences with no reason given, late arrival at school (after registration closed), and other absences where reasons deemed to be unacceptable.

In the school attendance section, year-on-year fluctuations in school attendance are presented in separate graphs, however, where patterns were relatively stable across time, the Figures include the most recent available data (2011/12); NB: Enrolments data were available until 2012/13; attendance data were available to 2011/12. This was the case, because enrolments were recorded at the start of the school year and actual attendance was recorded at the end of the school year. The full set of primary data can be found in the appendices.

Key findings

The secondary data analysis reported here was based on the Annual School Census collected by the Department of Education Northern Ireland (DENI). This is the first time that data collected annually about pupils' Special Educational Needs (SEN) were

analysed with regard to children with Autism Spectrum Disorder (CWA). Available data sets covered the period from 2006-2013. This section reported on prevalence of ASD, school enrolment, and school attendance.

Prevalence

Prevalence rates of ASD rose significantly in Northern Ireland, so much so that nearly 2% of all school children were diagnosed with ASD by 2012/13. This prevalence rate was similar to recent figures in the USA, released by Centre for Disease control and Prevention (CDC, 2013), who reported that 1:50 children were affected by ASD.

These data also confirm a recent study of prevalence of autism that also used School Census data (DHSSPS, 2014). However, the DHSSPS study only analysed data with regard to grant-aided schools in Northern Ireland between 2008-2013 and confirmed that the gender distribution and physical location (by Trust area) remained similar across the years.

However, while the data from the NI School censuses concurred with findings from the Millennium Cohort Study (MCS; see Section 3.1) for younger children, they did not reflect MCS findings for children aged 11 years; 1:29 (3.5%) of the parents of 11 year old MCS children had been told by a professional that their child was on the autism spectrum. Clearly, there seem to be a significant hidden population of children with ASD in the NI school system, that remain 'undiagnosed and untreated', similar to those identified by Kim et al. (2011)

Schools enrolment

Over the years, there was a clear reduction of enrolments for CWA in special schools. This reduction coincided with the UK ratification, in 2009, of the UN Convention for the Rights of Persons with Disabilities (UNCRPD, 2006) and was in line with the Salamanca Statement (UNESCO, 1994) when representatives of 92 governments agreed to adopt the principle of inclusion and agreed to 'work towards " schools for all" - institutions which include everybody, celebrate differences, support learning, and respond to individual needs' (p.iii). As such, it is likely that the findings reported here reflect a shift in policies designed to educate more children with SEN in mainstream education, rather than evidence of successful educational practices.

The trend to include children with ASD in the mainstream school system is likely to be responsible for the considerable levels of autism awareness and positive attitudes found in the general population in Northern Ireland, i.e., autism awareness lies between 82% (BASE Project Report Volume 2; Dillenburger, Jordan, & McKerr, Devine & Keenan, 2013; Dillenburger, Jordan, & McKerr, 2014) and 92% (National Autistic Society, 2007). Dillenburger et al. reported that over 50% of the general population actually know someone personally who was diagnosed with ASD and their knowledge of the condition was relatively accurate. As such, inclusive practices seems to have a positive effect on the awareness, perception and attitudes towards individuals with ASD in the general population.

Attendance

CWA generally had poorer school attendance than COA and therefore missed considerably greater amounts of teaching/learning time; i.e., 7-8% of CWA missed more than 4-5 school weeks (compared to 4-5% of COA).

Overall, in terms of actual school days missed, children with Asperger's who attended in special schools missed most school days; i.e., they missed nearly 2-3 weeks of school more than children without Asperger's in mainstream schools. This may be due to the fact that CWA in special schools may have greater ill-health than CWA who were able to attend mainstream schools; however it is more likely that their general unhappiness in school (see Section 3.1) and their parents lack of confidence in the school system (Lamb, 2002) are responsible.

In relation to mainstream schools, there was a considerable difference in attendance rates across ELBs. In order to shed a light on the reasons for this, it would be important to know about the different approaches to teaching CWA across the ELBs.

These findings confirm a recent study by Ambitious for Autism (2014) that focussed on the reasons for children with ASD missing out on education. Their survey included over 500 families and 1,000 school staff; and 92 local authorities through Freedom of Information evidence; 30 in-depth interviews with young people with autism and their parents. Their results showed that 20% of parents said their child with autism had been formally excluded in the past 12 months; 40% of children with autism had been excluded informally and therefore illegally during their time at school; over 50% of

the parents said that they had kept their child out of school because the school was unable to provide appropriate support.; 50% of parents said that they were unable to work or had to give up working as a result of their child's regular exclusions; 32% of parents who did work reported having to take substantial time off.

Socio-economic status

The relationship between socio-economic status (SES) and autism spectrum disorder is complex. While increased awareness and improvements in diagnostic time scales (Regional Autism Spectrum Disorder Network; RASDN, 2011) may have led to more comprehensive diagnosis rates in all areas, findings reported here indicate that families who have a CWA experience lower SES than families who have COA, and the gap appears to be increasing. The conclusion that individuals with ASD are more likely to reside in more deprived areas as measured by the Northern Ireland Multiple Deprivation Measure (NIMDM) is consistent with conclusions derived by DHSSPS (2013) using the same data but at decile level. As outlined in Section 3.1 (MCS findings), families of CWA incur greater childcare costs and higher rates of unemployment due to the demands of care, thus both income and expenditure were affected adversely (cf., Cidav, Marcus, & Mandell, 2012; Knapp, Romeo, & Beecham, 2009). In addition, families of CWA were more likely to rely on one income (cf., Gray, 2003).

However, a diagnosis of ASD was not always associated with lower SES, i.e., as measured by eligibility free school meals. The Department of Education introduced a new criterion for free school meals at the start of the 2008/09 academic year (see nidirect website). This meant that anyone with special educational needs who required a special diet was eligible for free school meals, regardless of whether they were on low income. Education and Library boards recorded the number of students who met this criterion, however, analysis according to ASD was not possible because disability data were not available in disaggregated format. It is possible that this policy change may have contributed to the disproportionate rise in CWA who were entitled to free school meals and thus categorised as low SES.

3.3) Young persons with autism: Behaviour and attitudes

Introduction

The Young Persons' Behaviour and Attitudes Survey (YPBAS) (2010) was carried out by the Northern Ireland Statistics and Research Agency, Central Survey Unit and funded by the OFMDFM, Equality and Social Need Steering Group; DENI; DHSSPS; DOE; and DRD. The dataset was obtained from the UK Data Archive. They required the following statement, prior to reporting secondary data analysis: 'The original data creators, depositors or copyright holders, the funders of the Data Collections and the UK Data Archive bear no responsibility for the analysis presented in this report.'

The Young Persons' Behaviour and Attitudes Survey (YPBAS) ran four times; in 2000, 2003, 2007, and in 2010. The purpose of the survey was to measure behaviour and attitudes of children aged 11-16 years who attended school in Northern Ireland. While the 2007 version of this survey asked participants if they had any conditions/disorders, autism was not listed until the most recent version, therefore the analysis presented here was restricted to the 2010 data sweep.

In order to identify potential participants for the YPBAS in 2010, the Central Survey Unit (CSU) obtained a list of all post-primary schools in Northern Ireland. This list did not include independent or special schools. From this list, 175 schools were selected using stratified random sampling; the sample was stratified by school size, school type (i.e. secondary or grammar), management group (i.e. controlled or voluntary), and Education and Library Board. The selected schools were then asked to provide information on the number of classes they had for years 8 – 12. Then a class was chosen randomly from each of the five year groups within selected schools to participate in the survey.

Pupils from the selected classes were invited to take part in the survey. If they refused to take part, they were not replaced. Seventy-seven schools gave their consent for the survey to take place within their school, a response rate of 44%. Pupils were asked to complete one of two versions of the YPBAS questionnaire, either Version A or B. While some questions were included on both Versions A and B, some questions

were only included on one version. For example only Version A had questions on diet and exercise, while only Version B asked about views on the environment. The individual pupil response rate for Version A of the questionnaire was 90% and for Version B it was 88%.

This secondary data analysis includes questions listed on both Versions A and B of the questionnaire, questions that were only presented in one of these versions were not included. In total 7,616 pupils completed the survey questionnaire (either Version A or B). Further details on the YPBAS 2010 can be found in the technical report for the survey (CSU, 2010a).

The sample was representative of mainstream post-primary school types, i.e., Grammar and secondary schools were represented proportionally. Special schools were not included in the sample. The exclusion of special schools had consequences for the generalisability of the results as prevalence figures of ASD delineated from YPBAS data applied to mainstream grammar/secondary education only. In reality, if special schools had been included in the YPBAS the prevalence of ASD amongst this age group would be expected to be much higher. Additionally, children with autism (CWA) who attend mainstream grammar/secondary education tend not face poverty and social exclusion to the same extent as CWA in special schools (see Section 3.2).

Key findings

The pupil self-declared prevalence rate of autism (ASD) in mainstream post-primary schools (YPBAS 2010) was 0.53%. This is much lower than prevalence rates delineated from other sources, and indicated that children may either not be aware of their disability or preferred not to self-disclose. Also, Asperger's Syndrome was not explicitly mentioned in the question on autism, and therefore some children with Asperger's Syndrome may not have identified with the term autism. There has been intense debate about the exclusion of the term Asperger's Syndrome from the 5th revisions of the Diagnostic Statistical Manual (DSM-5; APA, 2013) and findings reported here indicate that this may have adverse effects on self-declared ASD diagnosis.

Consistent with the MCS results on younger children, the YPBAS findings indicate that children in mainstream education aged 11-16 years with autism were at greater risk of poverty and less satisfying social relationships. These finding were highly relevant, because children with autism in mainstream education are generally considered to be higher functioning than those attending special schools, yet they are clearly at a disadvantage relative to their peers without autism.

In contrast to the MCS results that were based on younger children, reported in Sections 3.1 and 4.1, the employment status of parents of CWA in mainstream post-primary education was comparable to their peers without autism, although these findings were quite likely due to the exclusion of special schools from the YPBAS study; i.e., CWA from deprived backgrounds were more likely to attend special schools (see Sections 3.2 and 4.2). The exclusion of special schools from the YPBAS sample meant that the findings could not be generalised to CWA who attend special school. Future research needs to consider how to measure poverty and social exclusion in special schools.

3.4) School leavers

Introduction

Each academic year, DENI conducts the School Leavers Survey (SLS) to identify NI school leaver qualifications and destinations. DENI requests data from post-primary schools, but special and independent schools are not included in the SLS. When the schools are contacted they are provided with guidance on how to fill in the return, and contact information for queries is provided. Further information on the School Leavers Survey can be found in the School Leavers Survey procedural guidance.

For the present secondary data analysis, DENI provided destination and qualification figures aggregated over the period 2008 to 2012. DENI were unable to provide data separately for years 2008 to 2012 due to small numbers and the need for disclosure control.

Key findings

Secondary data analysis of the School Leavers Survey (SLS) identified differences and similarities of qualifications and destinations of CWA and COA, when they leave mainstream education.

CWA were more likely to leave mainstream education without 5 GCSE grade A*-C or equivalent compared to COA. While CWA were not at greater risk of leaving school to unemployment, there were some notable differences between CWA and COA. Specifically CWA were more likely to undertake further education/training and less likely to enter higher education than COA. The SLS did not include special schools, so unfortunately these findings cannot be generalised to CWA who leave special schools.

CWA who attended mainstream schools were less likely than COA to achieve well at school and go to University. They were more likely to go to Further Education colleges after leaving school. Children with autism were most likely to attend training, rather than University. Children with Asperger's Syndrome did attend University, all be it less so than COA.

These findings are not surprising in light of findings reported in Sections 3.1 and 3.2 that showed that CWA tend to come from more deprived backgrounds and miss a considerably greater amount of school days than COA. Of course, the recent study by Ambitious for Autism (2014), mentioned earlier, confirms these concerns.

The greater number of CWA coming through the school system (see Section 2) will of course have a major impact on the post-school sector, in particular the FE and the HE sector.

3.5) Further Education

Introduction

The Further Education (FE) figures reported here were produced by Department for Employment and Learning (DEL) using the Further Education Statistical Record

(FESR), and were quality assured by DEL in accordance with the Official Statistics guidelines (UK Statistics Authority, January 2009).

Available data were based on full-year student enrolments. Enrolments on Professional and Technical courses at all NI Further Education (FE) institutions were included.

Data confounds:

- In FE colleges, students can be enrolled on more than one course; therefore, the actual student numbers were probably slightly lower than enrolment figures. At the same time, students can be enrolled for part of the year, i.e., they may change or drop out of a course.
- The FE dataset included 'Autism Spectrum Disorder/ Asperger's Syndrome' under 'disability'. However, students were not required to declare their disability when they enrolled, and therefore the figures presented here may underestimate the prevalence of ASD enrolments.
- Students with ASD (SWA) may be recorded under a primary diagnosis of 'learning disability', and therefore not be included in a data search for ASD.
- SWA may be recorded under 'more than one disability' and therefore not be included in a data search for ASD.
- Finally, in order to enhance disclosure control in accordance with FE statistics policy (DEL, December 2012a), rounding was used in the tables. Specifically, all figures were rounded to the nearest 5, with numbers 0, 1, and 2 rounded to 0. This meant that total frequency in each row or column did not always match the overall total frequency.

Scottish, Welsh and English FE data banks were searched and statistical services were contacted to establish enrolments of SWA for comparative analysis. The category code for Autism and Asperger's Syndrome was not included in any existing data banks by Scottish Funding Council (SFC) (they were included only in 2013-14), thus disintegrated data on SWA were not available for Scotland. In England, the Further Education and Skills Analysis Department produced and published prevalence data on ASD and these are presented for comparative purposes in this report. Due to data quality and disclosure concerns (e.g., small frequencies), they did not provide data for England by subject areas.

In Northern Ireland, DEL provided enrolment statistics for SWA and students who do not have ASD (SOA) broken down by a number of the key variables (cf. FE statistical bulletin), including academic year, age band, and mode of attendance. Data on post-FE destination of SWA were not available.

Key findings

In their review, Chown & Beavan (2012) raised concerns over the lack of research on further education in relation to ASD. The findings presented in this section make a valuable contribution to the further education evidence base.

One of the few previously available sources of FE information was enrolments data in England (Data Service, 2014; discussed in BASE Project Report Volume 1). In England, the prevalence rate for FE enrolments of SWA rose from 0.12%, when it was first recorded in 2008/09, to 0.46% in 2011/12. The secondary data analysis reported here (Sections 3.5 and 4.5) provides Northern Irish enrolments data for SWA, and shows that English enrolment figures were consistently lower than NI enrolment figures (difference of 0.16 to 0.27 percentage points). The reasons underlying this discrepancy could be multiple, e.g. different disclosure rates, differences in coding, lower proportion of students with autism attending FE, or more effective recruitment processes.

Available NI data were much more detailed than the data available for England (Data Service, 2014); they covered types of courses, level of study, mode of attendance, achievement rates, and retention rates. In Northern Ireland, SWA and SOA had very similar achievement and retention rates, although, while SWA tend to study courses at a variety of levels, they were more likely to study Level 1 and entry level courses than SOA.

SWA were more likely to enrol onto *Education and Training; Arts, Media and Publishing,* and *History, Philosophy and Theology* courses than did SOA. Enrolments onto courses covering *Preparation for life and work* were twice as common for SWA compared to SOA. This may be explained to some extent, by gender, as generally males, more so than females, tended to study 'Preparation for Life' courses (see DEL, 2012b), and the male:female ratio of individuals with Autism Spectrum Disorder is

generally reported to be 4:1 (Elsabbagh et al. 2012). Enrolments onto other courses were less common for SWA such as *Engineering and Manufacturing Technologies; Leisure, Travel and Tourism; Agriculture, Horticulture and Animal Care*.

With regards to age of students, the pattern for FE was similar to the school figures obtained from the DENI (see Sections 3.2 and 4.2). Clearly, prevalence rates were higher in the younger compared to older age groups. This could be due to multiple factors, including broadening of the diagnostic criteria, accuracy of case identification, and awareness amongst professionals. It is, of course, quite possible that the true proportion of enrolments of SWA aged 25+ is higher than reported here and that these students do not self-declare and thus may miss out on available supports. These figures allow for predictions, specifically, that the need of places for SWA in the FE sector is likely to rise significantly as school children with autism become school leavers with autism who will need FE places.

3.6) Higher Education

Introduction

For the secondary analysis of Higher Education data, the Department for Employment and Learning (DEL) provided information on the number of students enrolled at NI Higher Education Institutions (HEI). The data were quality assured by Higher Education Statistics Agency (HESA) and additional validation checks were carried out by DEL.

Since 1994/95, a general code for 'disability' has been included in the education records collated by the Higher Education Statistics Agency (HESA). In 2004/05, this general 'disability' code became more detailed and ASD was added as a separate category. In 2010/11, the code 'ASD' was replaced with 'social/communicative impairment such as Asperger's Syndrome/other autistic spectrum disorder' (see HESA 2012/13 for more details).

The Equality Challenge Unit (ECU, personal communication, 2013; cf. HEFCE, 2013) played a key role in the development and recommendation of the new code and removal of the former code, specifically for 'Autistic Spectrum Disorder'. NB: The code, 'Autistic Spectrum Disorder', remained in use for students who were already recorded on the system under ASD; in actual fact, this only applied to very few students.

The new code 'Social/communicative impairment' is a much broader category than the previous ASD code. While the ECU recommended that this code should focus on autism/Asperger's Syndrome, they acknowledged that, ultimately, it is up to individual students to self-declare; students were not asked for evidence of diagnosis.

Due to these changes in definitions and substantial changes to the way information has been collected over the last five years, data prior to 2010/11 were not comparable to more recent data.

The figures presented here under ASD include anyone recorded under the old code of 'ASD' or new code of 'Social/communication impairment such as Asperger's Syndrome/other autistic spectrum disorder'.

Self-declaration remained one of the key limitations of the available data sets. For many reasons, including equality and confidentiality, it is not mandatory for a student to self-declare disabilities, although, in order to access support through HE disability services, it is usually in their best interests to do so.

The Higher Education Statistics Agency (HESA, personal communication, 2013) stated that due to self-declaration, they could not provide data on the proportion of students who self-declared. HESA also acknowledged that some students may choose not to self-declare a disability, but they had no data on these students. For these reasons, the figures presented here may underestimate the actual number of students with ASD (SWA) attending Higher Education Institutions (HEI).

Key findings

The literature review conducted for the BASE project (BASE Project Report Volume 1; cf. Chown & Beavan, 2012) revealed a lack of educational research regarding

adults with autism. While Section 3.5 helped to address the lack of research on Further Education covering teenagers and adults, this section expanded knowledge and understanding of SWA in Higher Education.

HEI data revealed a substantial increase in the number of enrolments of SWA at University. Most of the SWA from NI stayed in NI to study, however some went to University elsewhere. Very few SWA attending Northern Irish Universities came from outside NI.

The reasons why so many SWA were reluctant to relocate to go to University may be related to general mobility difficulties (Jansiewicz et al., 2006) and support needs (Stewart, 2008), that were better served by studying from home. However, it remained unclear from the figures presented here whether SWA were happy to go to University in NI or if they would have preferred a course elsewhere but felt that there were barriers preventing them from studying far away from home.

The issues around gender were also interesting. While the gender distribution in ASD is generally acknowledged to be 4:1 in favour of males, this was not reflected in HEI enrolments, i.e., at a near 40:60 distribution, women were overrepresented in SWA. It was unclear whether this was related to female SWA feeling better supported and thus more able to attend HEI or whether they were more willing to seek help and disclose their diagnosis to HEI disability services.

SWA differed from SOA in terms of the subjects studied and it may be that to some extent differences in the subject data for SWA and SOA may be attributed to gender differences as opposed autism per se. Some HE subjects traditionally are favoured by one gender over the other, e.g., traditionally, female dominated subjects include *subjects allied to medicine, social studies, education,* and *languages* (DEL, February 2013) and traditionally male dominated subjects include *engineering and technology*.

Ultimately, care must also be taken when interpreting the HEI subject data as it was not possible to verify some of the findings, such as the relatively high enrolment figures returned for SWA studying *subjects allied to medicine,* such as *nursing*.

3.7) Employment

Introduction

Information on employment was supplied by Disability Employment Service at DEL (DES) although, despite the broad spectrum of functioning of person with autism, a breakdown of levels of functioning was not available. The employment rate of adults with autism in England (AWA) is 15% (Rosenblatt, 2008); this means that the vast majority (85%) of adults with autism (AWA) are unemployed or economically inactive. In Northern Ireland, a number of work schemes are available for AWA, delivered by DES.

Key findings

In total, 99 adults with autism benefitted from the programmes for which data were available, although data were not available regarding the level of support offered and the time scale for which support was required. In most of the programmes, the numbers of AWA were small, although this has to be viewed in the context of the duration of the programme, i.e. some programmes were introduced quite recently. The most successful programme was the Workable (NI) programme that included 70 AWA since 2006 and Access to Work (AtW) that supported 12 AWA in employment in 2013.

Most of the programmes for which data were available have not been formally evaluated, with the exception of AtW (NI) Programme that was found to have been 'effective in providing people with disabilities additional assistance through practical help and support, as well as helping to meet the additional costs incurred because of the disability' (KPMG, 2009, p. ii).

While overall, the numbers of adults with autism who benefitted from work programmes seems low, for the most part these programmes seemed to have provided some useful support. However, to date the actual employment opportunities are relatively limited; i.e., the necessary skills were more appropriate for relatively low functioning AWA. However, for high functioning AWA these employment

opportunities may not have provided a suitable match for their skills. Unfortunately, level of functioning was not routinely assessed making it difficult to evaluate the success of programmes. Therefore, it is recommended that employment programmes record level of functioning and level of employment opportunities.

Given the high prevalence rates of autism in NI (see Sections 3.1 and 3.2) and the low employment rate associated with autism (Rosenblatt, 2008), it is surprising that the numbers on the DES programmes were so low. In evaluating autism employment services provided by DES, a UK comparison may not be appropriate, although evaluation, such as those conducted for Prospects (Howlin, Alcock, & Burkin, 2005) can provide a useful starting point. Yet, regional and timing differences could confound comparisons.

A useful way to evaluate the DES programmes would be to compare them against other mainstream provision such as Steps to Work. Unfortunately, currently the Steps to Work database does not hold detailed information on disability making such comparisons impossible. It is therefore recommended that an autism category (including a reference to levels of functioning/ability) is included in work programme monitoring.

3.8) Multiple Exclusion and Homelessness

Introduction

Data from the Multiple Exclusion Homelessness (MEH) survey (Fitzpatrick et al., 2010) were used to assess exclusion and homelessness of adults on the autism spectrum (AWA). The MEH survey employed a multi stage design in six urban locations where a sizable proportion of the population faced exclusion and homelessness; namely, Belfast, Birmingham, Bristol, Cardiff, Glasgow, and London (Westminster). Data from Leeds, obtained during the pilot in 2009, were also incorporated into the survey. Information on autism was obtained from the question 'do you have any of the health problems or disabilities listed on this card?' (see Appendix 7). Autism was not actually included in the list read out to respondents yet it was included in the dataset; respondents were likely to have listed autism in response to the option: 'other health problems'. Since autism was not listed explicitly

on the card, it is possible that some respondents who did have autism may not have disclosed.

The research design employed by the MEH survey included three stages:

1) Agencies offering 'low threshold' support to individuals facing significant social exclusion were identified. This list of agencies was then used as a sampling frame from which six services were selected randomly at each of the selected urban locations (only three were selected at Leeds).
2) Over a period of two weeks a census questionnaire was administered to users of these selected services. This questionnaire contained 14 yes/no questions that assessed multiple exclusion and homelessness, covering topics such as homelessness, substance misuse problems, and offending. A total of 1,286 people responded to the survey, equating to an estimated response rate of 52%.
3) The responses from the 14-item census questionnaire were then used to identify individuals facing MEH. Extended interviews were carried out with 452 individuals (response rate 51%) who had been identified as facing MEH and who had given informed consent. It was at this stage of the study that respondents were asked if they had a disability, and this question included ASD.

The Multiple Exclusion 2010 survey dataset (funded by Economic and Social Research Council; ESRC) was obtained from the UK Data Archive. Copyright of the dataset belongs to Heriot-Watt University and University of York.

All opinions and interpretations reported here are those of the authors, and the UK Data Archive bears no responsibility for the present analysis. For further information on the survey see Fitzpatrick, Bramley, and Johnsen (2012).

Key findings

At face value the MEH results suggest that adults with autism were not over represented amongst those facing multiple exclusion and homelessness. However, it is possible that response bias influenced the results. For example, in the NILT 2012 general population survey very few respondents (less than 0.5%; BASE Project

Report Volume 2) stated that they had autism, despite the estimated prevalence rate of autism in adults of 1.1% (Brugha et al., 2012). Therefore, low rates of autism in both the NILT 2012 and the MEH could reflect reluctance to disclose autism and/or reluctance of AWA to take part in surveys. Of course, NILT 2012 and the MEH survey were not specifically designed to measure the prevalence of autism.

Response bias appeared to be less of an issue for surveys such as the Millennium Cohort Study (MCS), where the parent responded as opposed to the individual with autism themselves. Indeed the MCS prevalence rates were very much in line with the DENI census data, at least up until the children were aged 7 years. It is also important to emphasise that even if AWA were under-represented in the MEH sample that does not mean that they were not at risk of poverty or multiple exclusion; indeed the findings reported in Sections 3.1 and 3.2 show clearly that AWA are at risk of poverty. Rather the MEH survey findings indicated the risk of very specific types of exclusion and poverty, such as being homeless or addicted to drugs.

3.9) Northern Ireland Life and Times Survey 2003 and 2012

Introduction

The Northern Ireland Life and Times (NILT) Survey is an annual general population survey conducted annually in Northern Ireland, that allows researchers to 'purchase' a module. Each year the NILT Survey included up to 4 modules covering a range of different topics of interest. In 2012, NILT survey included the first ever, a designated module on ASD as part of the BASE project. The methodology is detailed in BASE Project Report Volume 2, the NILT Survey autism module.

In 2003, the NILT Survey included one specific question related to autism, namely, participants were asked about their attitudes regarding a child with autism (CWA) attending the same class at school as their own child. A very similar question was posted in 2012 and therefore a comparison of responses between 2003 and 2012 is presented here.

The methodology employed by the NILT Survey in 2003 was similar to that employed in the 2012 NILT Survey. The NILT 2003 Survey involved interviewing 1,800 adults from Northern Ireland. Respondents were also asked to fill in a self-completion questionnaire. The sampling frame for the NILT 2003 Survey was the Postal Address File (PAF). Participants were selected from this sampling frame using simple random sampling with stratification by geographical region (Belfast, East of the Bann, and West of the Bann). A Kish grid was used to randomly select one adult per household to participate in the study. The response rate for the NILT 2003 Survey was 62%. Further details on the NILT 2003 Survey are available in the survey's technical report (Devine, 2003).

Key findings

A full discussion of the results of the NILT Survey 2012 is presented in Volume 2 of the BASE Project Reports.

While a direct comparison between the NILT 2003 and 2012 Surveys was not possible due to slightly different wording of the survey question related to ASD, data indicated that over the 9-year period between the two surveys, positive attitudes towards children with autism seemed to increase. This finding is in line with the increased overall autism awareness in Northern Ireland that now stands at 82-92% (Dillenburger et al., 2013). The increasingly positive attitude as likely to be based on increased expose and thus experience with persons with autism, given that over 50% of the NI population know someone with autism personally (BASE Project Report Volume 2).

4) Detailed Results and Findings

4.1) Millennium Cohort Study

Prevalence of autism

When the MCS study child was aged 5 years, the main respondent was asked for the first time, if the child had a diagnosis of autism/Aspergers, this question was also include in subsequent data sweeps when the children were 7 and 11 years old. For the prospective analysis of the earlier data sweeps (birth/9 months and 3 years old), we used the distinction between children with autism/Aspergers (CWA) and children without autism/Aspergers (COA), that were derived from the 5 year old data sweep (MCS data collected in 2005).

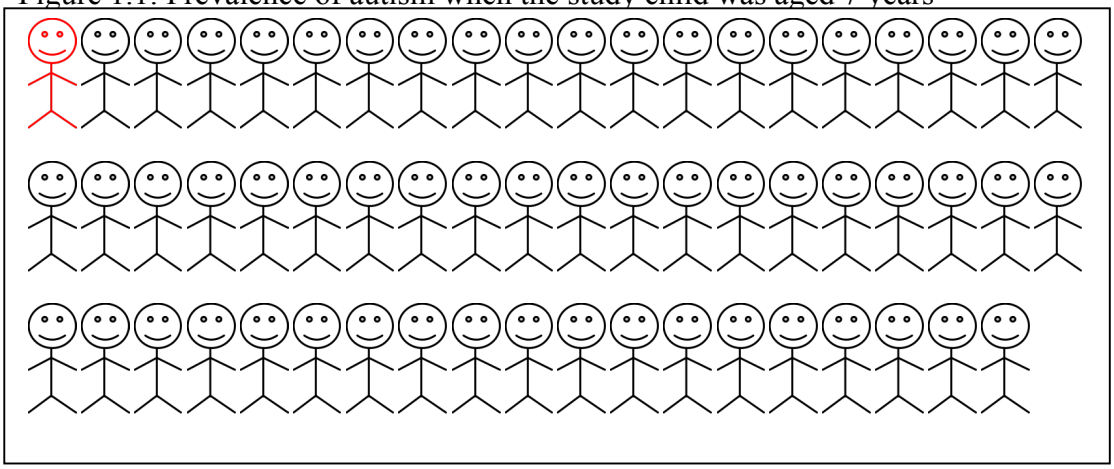
When the Millennium Cohort Study (MCS) children were aged 5 years, 0.9% of the total sample had received a diagnosis of autism (Appendix 1.28). Expressed another way this means that 1 in every 109 children aged 5 years had a diagnosis of autism/Aspergers.

When the children were 7 years old, in total 1.7% of the sample said that their child had a diagnosis of autism/Aspergers (Figure 1.1; Appendix 1.27;see also: Russell, Rodgers, Ukoumunne, & Ford, 2013). When checked for NI data only and found that the estimated prevalence of ASD at age 7 years in Northern Ireland, was slightly higher at 1.9%, however due to the relatively small size of the NI sample, it was not possible to say with any certainty if this was significantly greater than the overall UK prevalence rate.

At age 11 years, according to MCS parental reports (Appendix 1.29), as many as 1 in 29 children had a diagnosis of autism (3.5%).

Figure 1.1 illustrates the prevalence rate of autism/Aspergers of 1 in every 59 children aged 7 years.

Figure 1.1: Prevalence of autism when the study child was aged 7 years



When the study child was aged 7 years the main respondent was asked if the child's school had ever told them that their child had special educational needs/additional support needs. If they responded 'yes', they were asked to name the reasons for those special educational needs/additional support needs (e.g. learning difficulties). Respondents could list more than one reason if applicable. Most parents of CWA (64%) said that autism/Aspergers, i.e., behavioural issues related to ASD, was the reasons for their support needs (Appendix 1.30). Fewer than one fifth of the parents of CWA (19%) stated that the child had support needs as a result of their learning difficulties (Appendix 1.31).

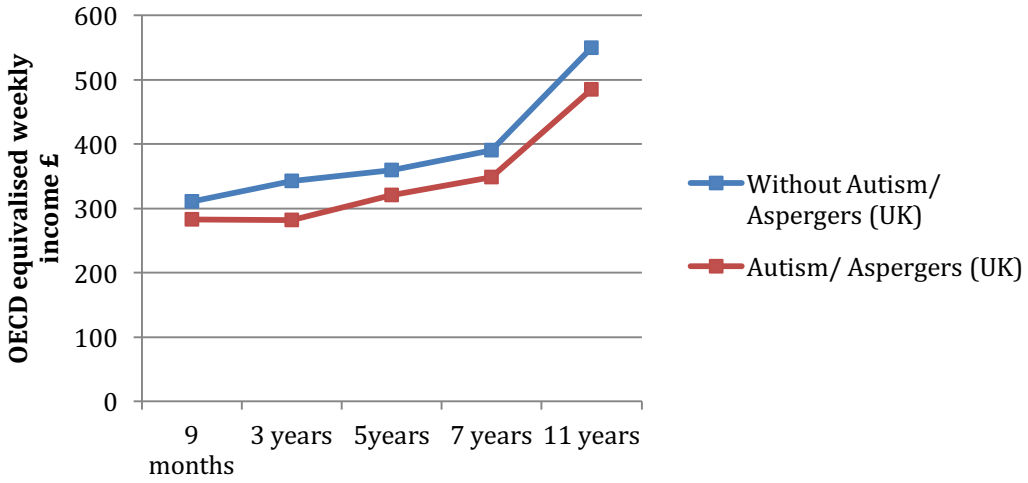
Family income

The Organisation for Economic Co-operation and Development (OECD; Office for National Statistics, 2014) calculated '*equivalised income'* as a measure of financial income adjusted for household size and composition. This adjusted income measure was used by the Millennium Cohort Study statisticians and in the present analysis, as obviously, bigger households on average will require a greater level of income to lift them out of poverty.

For families of COA, average weekly equivalised income increased from £310 when the child was aged 9 months to £549 when the study child was aged 11 years (Figure 1.2; Appendix 1.32). An increase also was seen for families of CWA; however, their income was consistently lower (by £28 to £64 per week) than that of families of COA. Statistical analysis revealed a significant difference in OECD equivalised

income in the UK between these two groups at age 3 and 11 years, with the difference at 9 months, 5 years, and 7 years approaching significance.

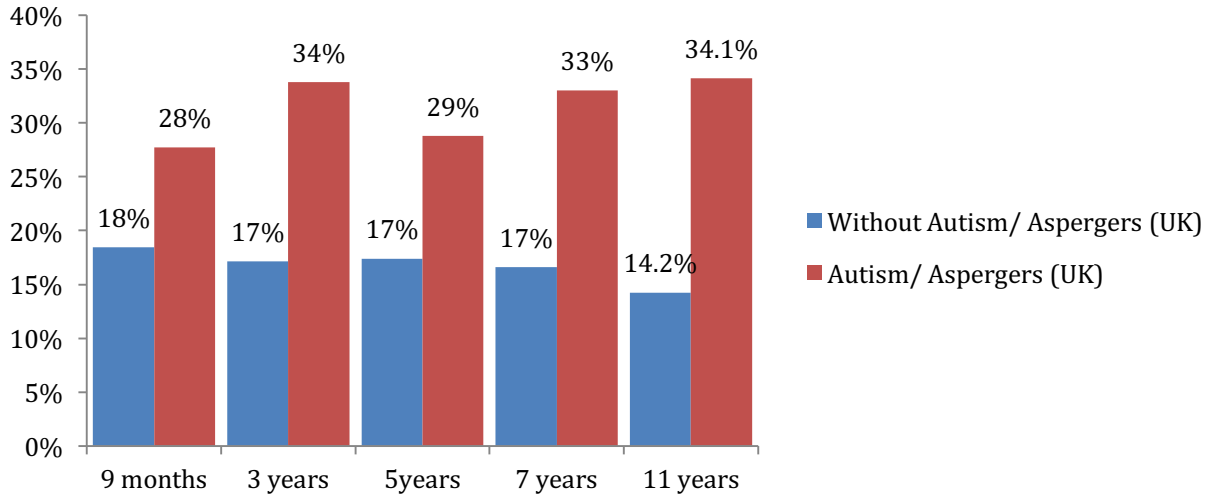
Figure 1.2: OECD equivalised income for families of study child aged 9 months to 11 years



Family employment status

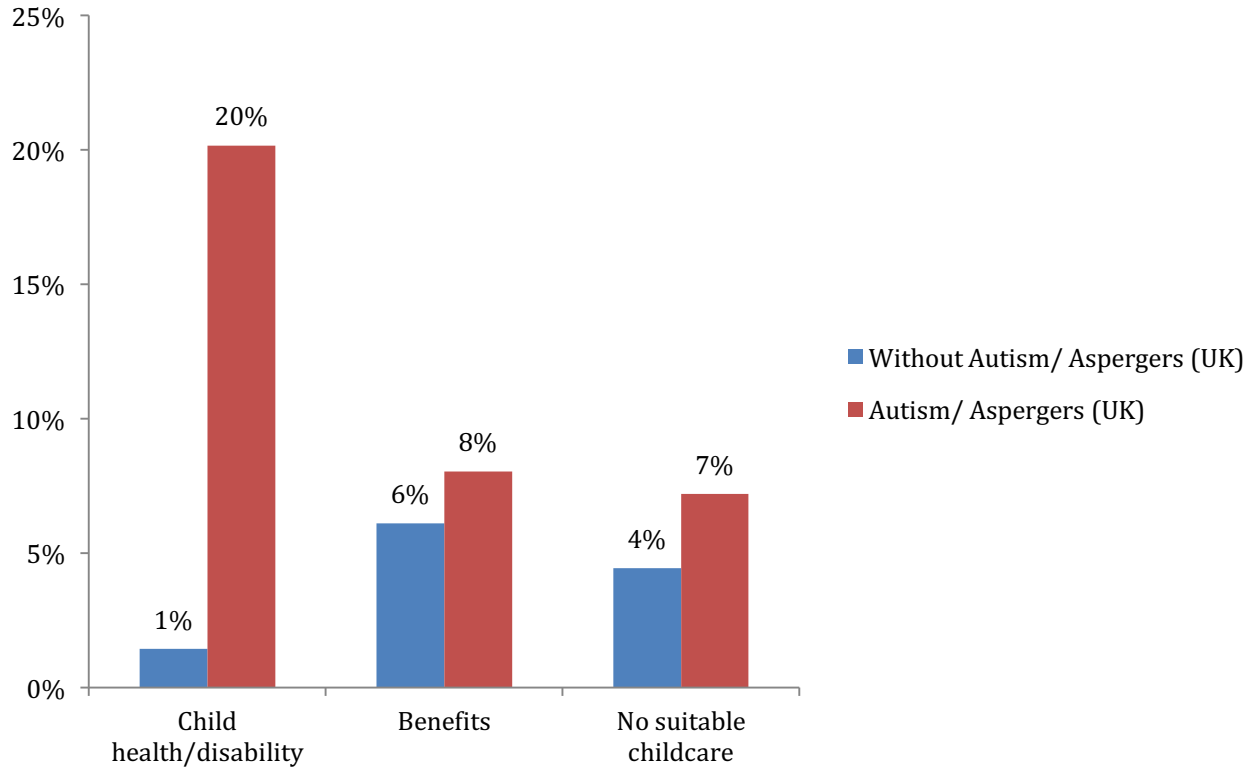
Over the 11-year period covered by the MCS todate, a greater proportion of families of CWA reported that neither they nor their partner (if they had one) were in work, when compared to families of COA (difference of 9-20 % points). Figure 1.3 (Appendix 1.33) shows the proportion of families where parent/s were unemployed. When the children were 9 months old the difference in employment rates between families with a CWA relative to families with COA was smaller (approaching significance) than when the children were aged 3, 5, 7, and 11 years when differences in unemployment rates were statistically significant. Children with special education needs but without a diagnosis of autism had very similar family unemployment rates (range 29.6% to 33.4%) as families with COA.

Figure 1.3: Proportion of families in unemployment



When the children were aged 7 years parents who were out of work and not looking for paid work were asked why they were not looking for paid work. Respondents could cite more than one reason. Figure 1.4 (Appendix 1.34) presents the proportion of parents who said they were not looking for work because of their child's health/disability, alongside other issues indirectly related autism, such as benefits and childcare. One in five (20%) of the respondents who had a CWA felt that their child's health problems/disability led to their decision not to seek work; this was significantly greater than, and 14 times the proportion of respondents with a COA who were not looing for work (1.4%). No statistically significant differences were found for reasons such as 'I cannot find suitable childcare' and 'my family would lose benefits'.

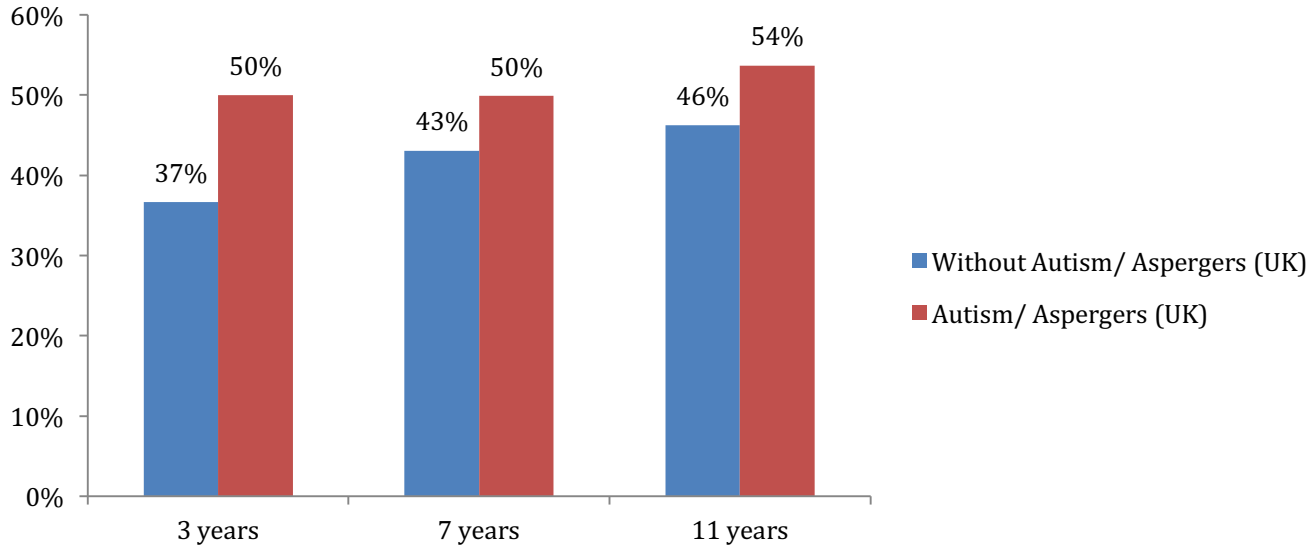
Figure 1.4: Reasons for not actively seeking work



Managing financially.

Poverty measures, such as income, have been criticised for not taking into account the extra costs associated with a disability (Monteith, Casement, Lloyd, & McKee, 2009). MCS data allowed for an examination of how families felt they were coping financially (Figure 1.5; Appendix 1.35) when their children were aged 3, 7, and 11 years. Across the intervening eight years, around half of respondents who had a CWA (50-54%) felt that they were financially struggling, i.e., they stated that they were either 'Just about getting by', 'Finding it quite difficult', or 'Finding it very difficult'. For families with COA the respective figures were 37%, 43%, and 46%. The second set of these data coincided with the global recession and while the difference between the two groups approached statistical significance when the children were aged 3 years, they were not statistically significant when the children were aged 7 or 11 years.

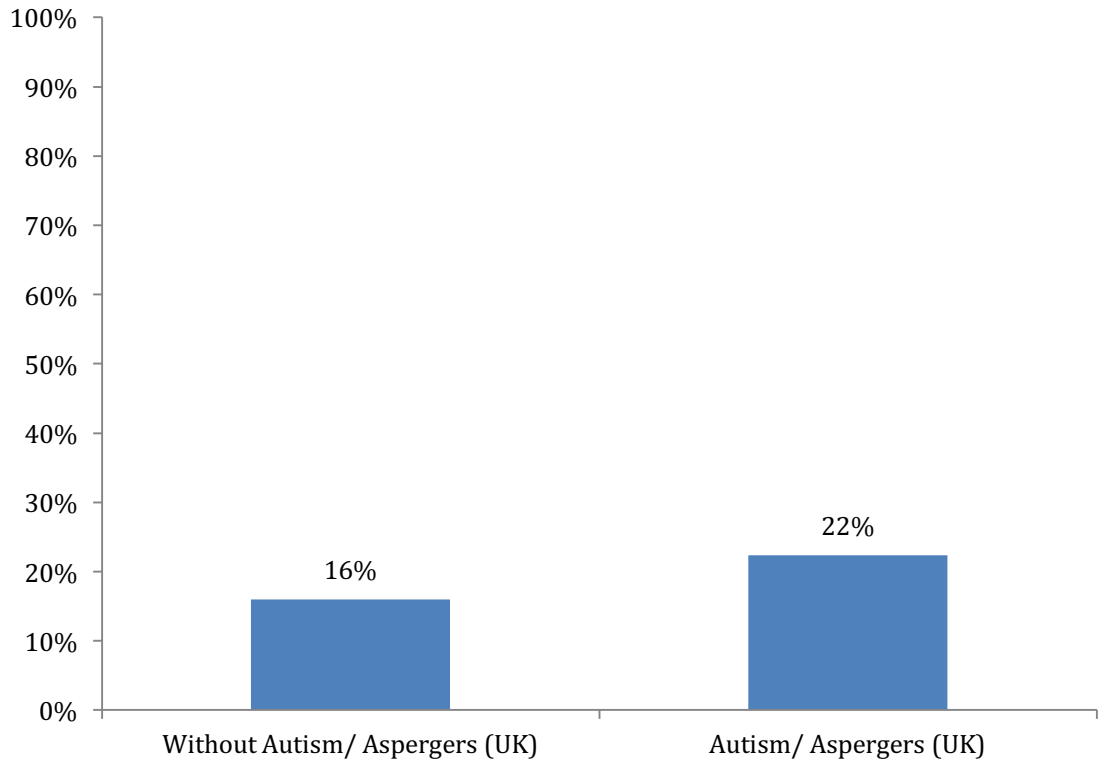
Figure 1.5: Families experiencing financial hardship



Of course, the perception of how well a family is getting by financially is quite subjective and it is possible that the two groups differed in terms other than absolute income, such as expectations or resilience.

More concrete evidence is the ability to pay household bills. When their child was aged 7 years (Figure 1.6; Appendix 1.36) a greater proportion of respondents who had a CWA (22%) said that they were behind with at least one bill (e.g. electricity, gas, insurance, credit card payments) compared to respondents of COA (16%). Statistical analysis indicated that this difference was small but approached statistical significance.

Figure 1.6: Proportion of families behind on at least one bill



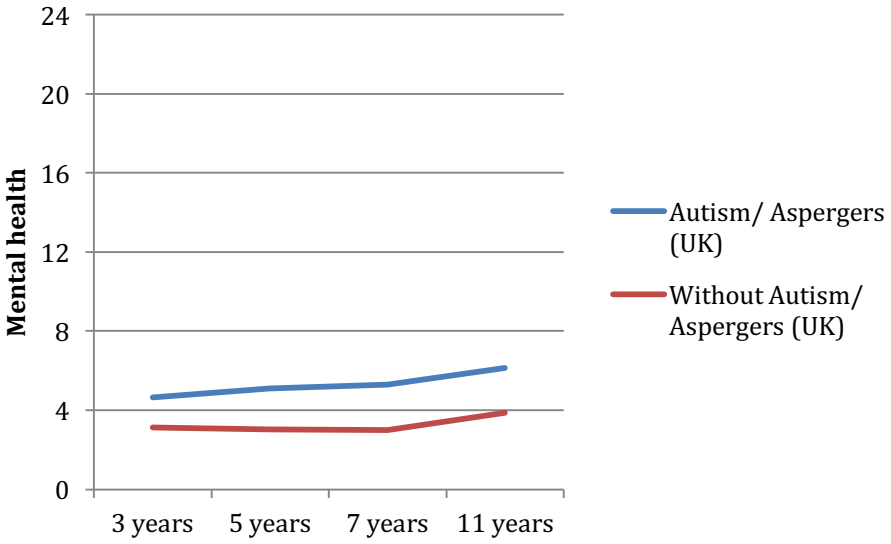
Health and wellbeing of the mother

The vast majority of the time the natural mother was the main respondent across the whole Millennium Cohort Survey; i.e., over 96% of main respondents interviewed were natural mothers; the father acted as main respondent in only a few cases and even then usually only at one or more time points (see Hansen et al., 2012, for more details). The health, including the mental health, of the mothers is an important factor in the care of children and can be affected by having a CWA (Dillenburger et al., 2010). Of course, maternal mental health can change especially during the early years of the child's development. Therefore, in order to limit confounding effects that could be attributed to different people completing a questionnaire, the analysis of maternal mental health included only families where the child's birthmother completed the MCS at all time points (i.e. 'natural mother' was used as a subgroup in the analysis).

The mental health of birth-mothers was assessed using the Kessler (K6) scale (Kessler et al., 2003). The Kessler (K6) measures mental health on a 0-24 scale, with higher

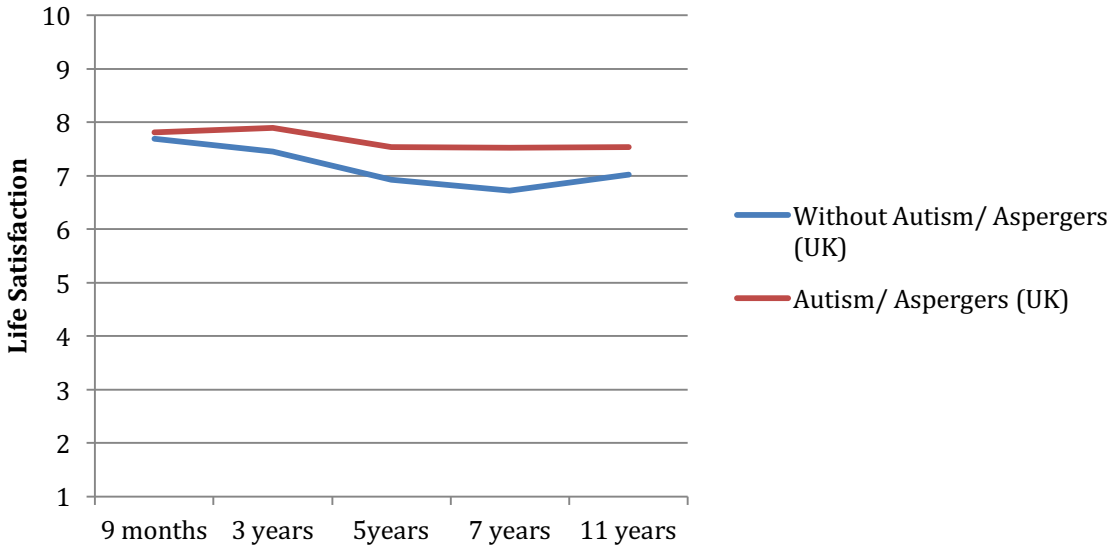
scores indicating poorer mental health (Figure 1.7; Appendix 1.37). At all time points, apart from when child was 9 months old which is usually prior to any symptoms of ASD, mothers of CWA had poorer mental health than mothers of COA (1.5 to 2.3 Kessler scale points difference). The differences were statistically significant across all age ranges and the analysis revealed that the magnitude of the difference increased from small to medium (see Appendix 1.53 for definitions of small and medium) as the child grew older.

Figure 1.7: Maternal mental health across time according to child age



With regard to life satisfaction, a Likert-type scale was used ranging from 1 (completely dissatisfied) to 10 (completely satisfied) to identify how satisfied or dissatisfied participants were about the way their life had turned out so far (Figure 1.8; Appendix 1.38). Similar to the mental health analysis, our secondary data analysis focussed on natural mothers who had participated in all five waves of data collection. Mothers of COA and CWA reported similar levels of life satisfaction pre-diagnosis, i.e., when their child was aged 9 months old. At child ages 3, 5 and 11 years the difference in COA and CWA mental health scores approached significance.

Figure 1.8: Life satisfaction of the natural mother: child ages 9 months to 11 years



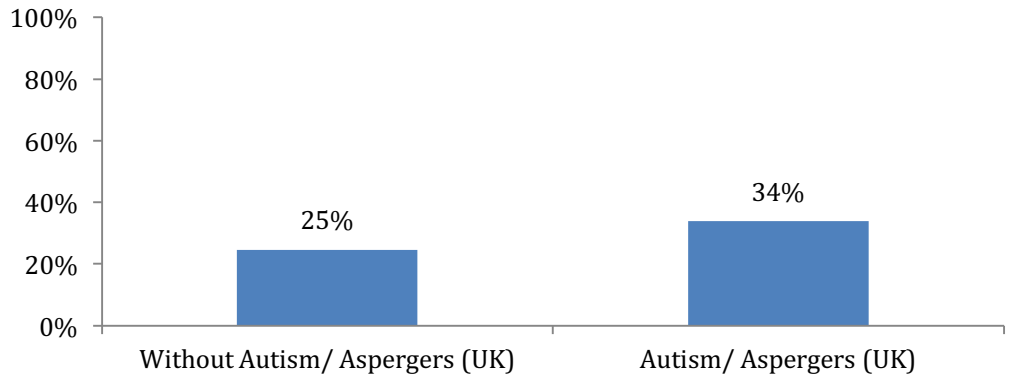
When the child was aged 7 years statistically significant differences emerged in the life satisfaction of two groups of mothers; mothers of CWA reported life satisfaction levels that were 0.8 points lower than the life satisfaction of mothers of COA at the respective child ages.

Child's health

The prospective nature of the MCS offered a unique opportunity to explore the health of CWA prior to receiving a diagnosis. In this section, child health data are reported pre-diagnosis (birth and at nine months) and post-diagnosis (aged 5 years and 7 years).

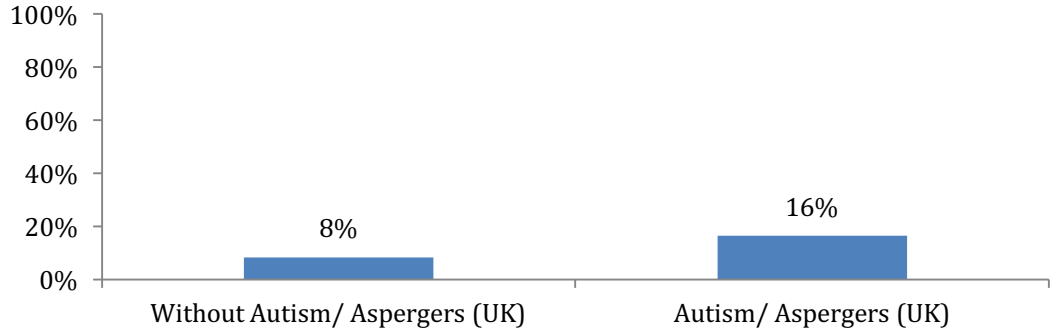
When the study child was 9 months, the main respondent was asked about health concerns with their child at the time of birth or at any time during the first week (e.g. breathing difficulty; jaundice). A greater proportion of carers of CWA (34%) reported that their child had some difficulty at birth, in comparison to one quarter (25%) of carers of COA (Figure 1.9; Appendix 1.39). This difference was nearing statistical significance.

Figure 1.9: Child health and development problems at birth or within the first week



When the study child was aged 9 months, the child's carer was asked about the child's current health and developmental status (e.g. hearing, seeing, movement, slow development). This question excluded some concerns that had been addressed in previous parts of the survey, e.g. concerns about crying. The difference between the two groups of children was statistically significant; i.e., the proportion of children who raised health concerns at 9 months of age was 16% for children later diagnosed with ASD (CWA), double that for children later not diagnosed with ASD (COA) (8%) (Figure 1.10; Appendix 1.40).

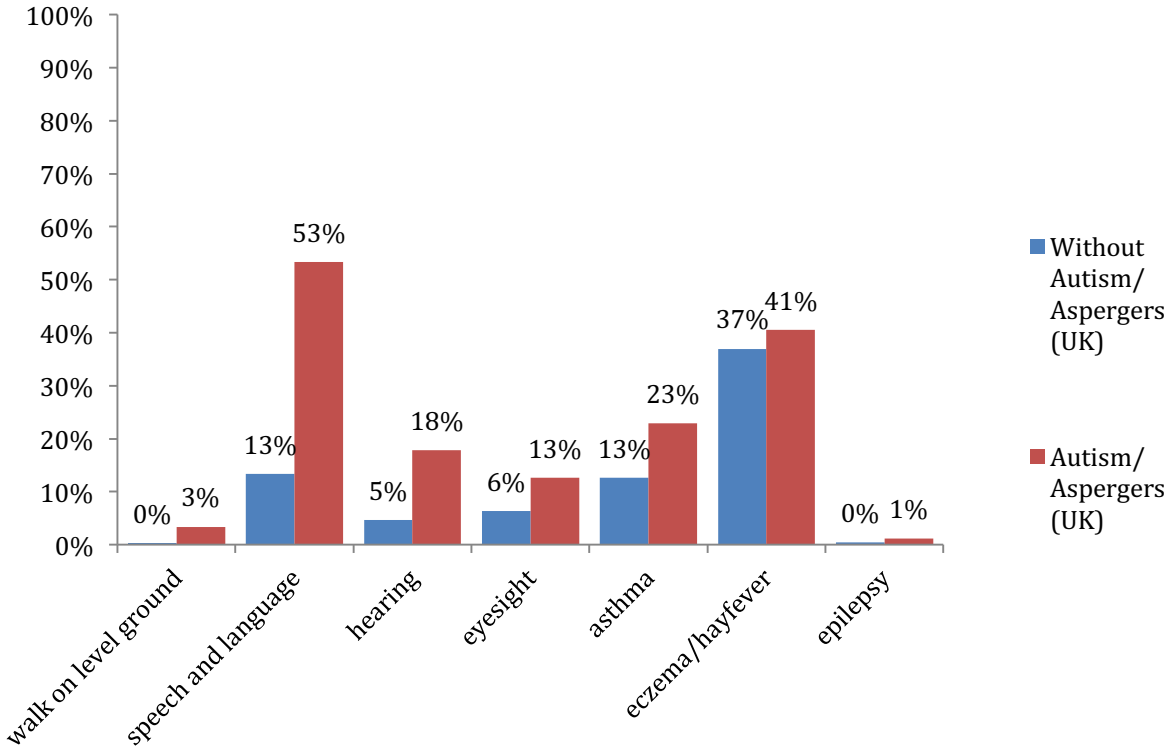
Figure 1.10: Child health and development problems at 9 months of age (prior to diagnosis)



When the child was aged 3 years the carer was asked a series of questions about the child's health and development such as: Can the child walk on level ground? Does the child have problems related to speech and language, hearing, eyesight, eczema/hayfever, epilepsy or asthma? The responses to these questions are displayed in Figure 1.11 (Appendix 1.41). Significant differences were found between children later diagnosed with ASD (CWA) and the other children (COA) in the prevalence of

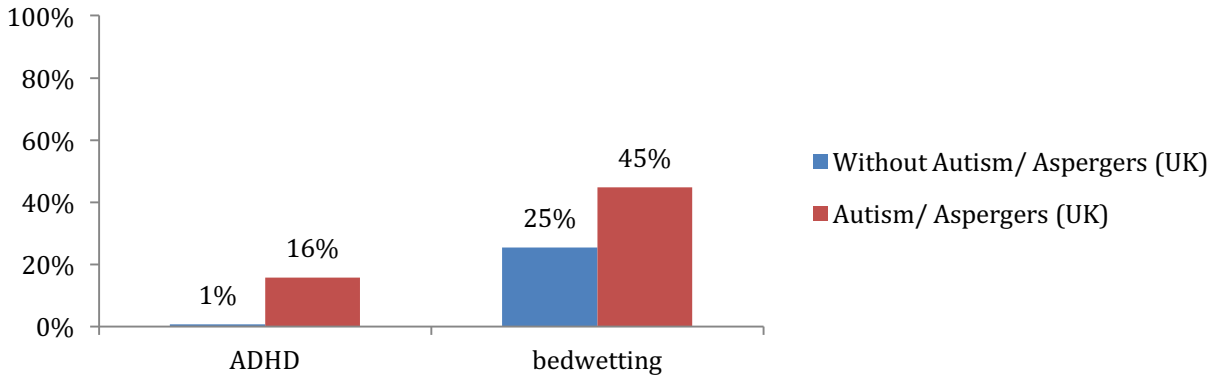
all of the health conditions, with the exception of hayfever/eczema and epilepsy. Prevalence was notably higher for CWA for difficulty walking on level ground (10 times higher) as well as speech and language difficulties and hearing problems (both around 4 times higher).

Figure 1.11: Child health and development problems at 3 years (prior to diagnosis)



When the child was aged 5 years further questions were added to the MCS about the child's health and development. For example, carers were asked if their child had ADHD or wet the bed. Responses to these questions are displayed in Figure 1.12 (Appendix 1.42). Significant differences were found at age 5 years between the prevalence of ADHD amongst CWA (16%), and COA (1%). In fact, ADHD prevalence was 23 times higher amongst CWA. Bedwetting was also significantly more common amongst CWA (45%), relative to COA (25%).

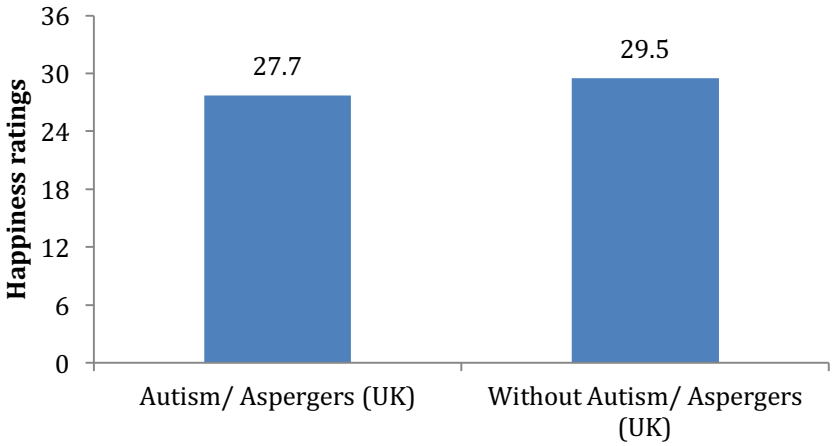
Figure 1.12: Child health and development problems at 5 years



Happiness

At child age 11 years, the cohort children were asked to indicate how happy they were with their schoolwork, the way they looked, their family, their friends, the school they went to, and their lives as a whole. Responses to these questions regarding happiness were combined for the purposes of this analysis to form a 'happiness measure' (score range 0-36), where higher scores indicate higher levels of happiness. CWA had significantly lower overall happiness scores relative to COA (Figure 1.13; Appendix 1.43).

Figure 1.13: Self-reported child happiness scores at age 11 years

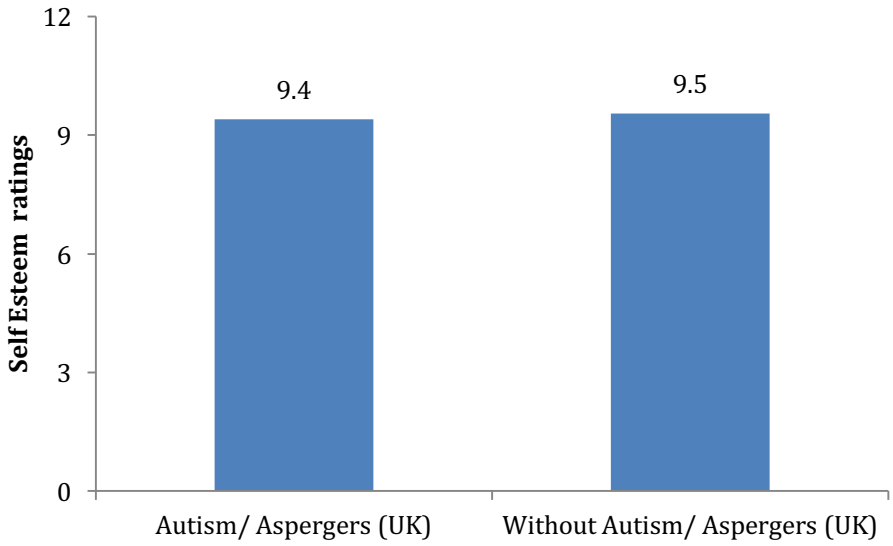


Self Esteem

Cohort children were also asked several questions that related to self esteem at age 11 years. They were presented with several statements: On the whole, I am satisfied with myself; I feel that I have a number of good qualities; I am a person of value; and I feel good about myself. For each of these statements, the children were asked to rate their

level of agreement/disagreement. Responses to these four statements were combined to form a 'self-esteem' measure (scale range 0-12), with higher scores indicating higher self-esteem. According to this measure, COA and CWA had very similar levels of self-esteem at age 11 years (Figure 1.14; Appendix 1.44).

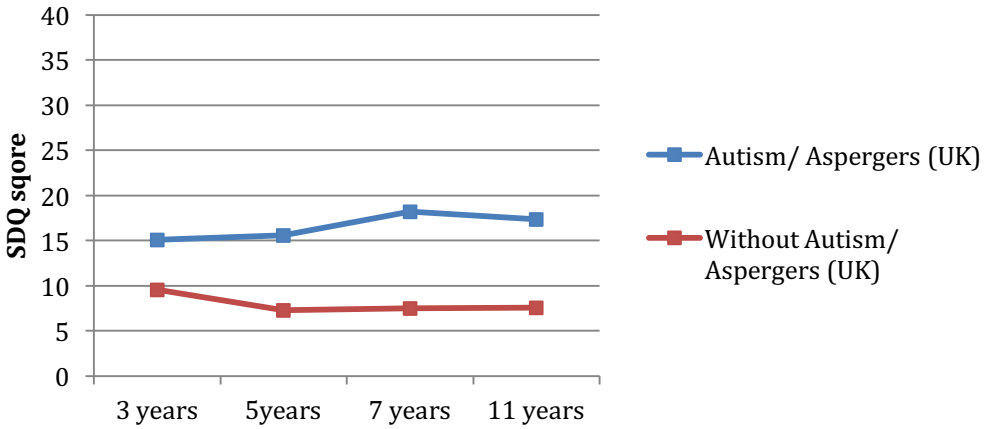
Figure 1.14: Self-reported child self-esteem scores at age 11 years



Strengths and difficulties

The Strength and Difficulties Questionnaire (SDQ; Goodman, 1997) measures emotional symptoms, conduct problems, hyperactivity, and peer problems and usually is completed by the main caregiver. The total difficulties scale ranges from 0-40, with higher scores indicating greater levels of difficulty. Significant differences were found between CWA and COA on the total difficulties scale at ages 3, 5, 7 and 11 years (Figure 1.15; Appendix 1.45). Between child ages 3 and 7 years the gap between the two groups of children widened considerably (10.7 points).

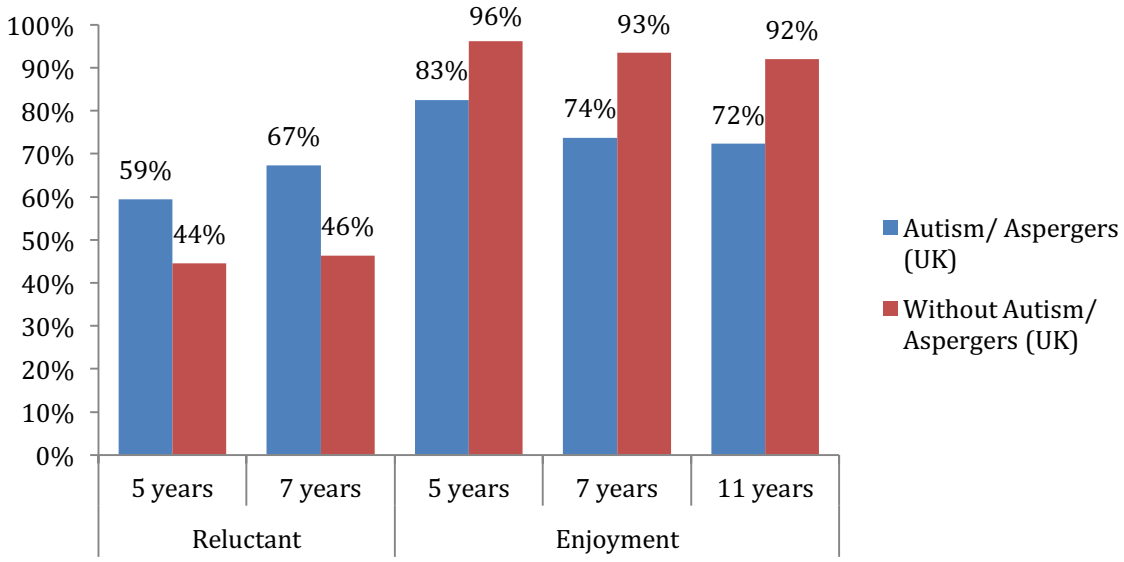
Figure 1.15: Total SDQ scores for children aged 3 to 11 years



Child's experience of school

One of the key outcome areas of the ten-year strategy for children and young people in Northern Ireland 2006 – 2016 (OFMDFM, 2006) is 'enjoying learning and achieving'. In order to assess this, the proportion of children who were reluctant to go to school as well as the proportion who usually/always enjoyed school was analysed (Figure 1.16; Appendix 1.46). Compared to COA, a significantly greater proportion of CWA were reluctant to go to school at ages 5 years (15 % points more children) and 7 years (21 % points more children). In addition, CWA were less likely to usually/always enjoy school at ages 5, 7 and 11 years. The difference between the proportions of CWA and COA enjoying school/reluctant to go to school increased between ages 5 and 7 years.

Figure 1.16: Children's enjoyment of and reluctance to go to school ages 5, 7 and 11 years



A significantly higher proportion of main respondents reported that their CWA (4.6%) had been excluded temporarily from school by age 11 years (Figure 1.17; Appendices 1.47 & 1.48), compared to COA (1.5%). A higher proportion of CWA had been excluded permanently in comparison to COA; however, this difference was not statistically significant.

Figure 1.17. Proportion of children temporarily or permanently excluded from school by age 11 years

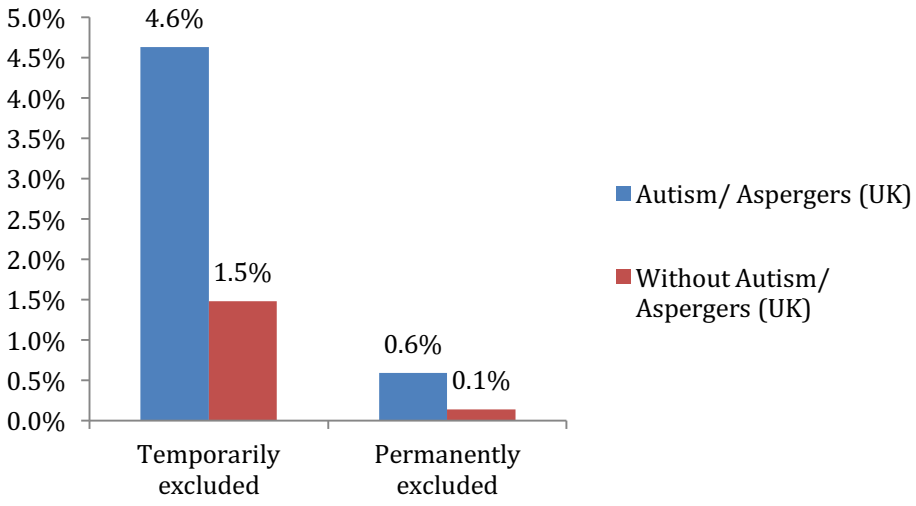
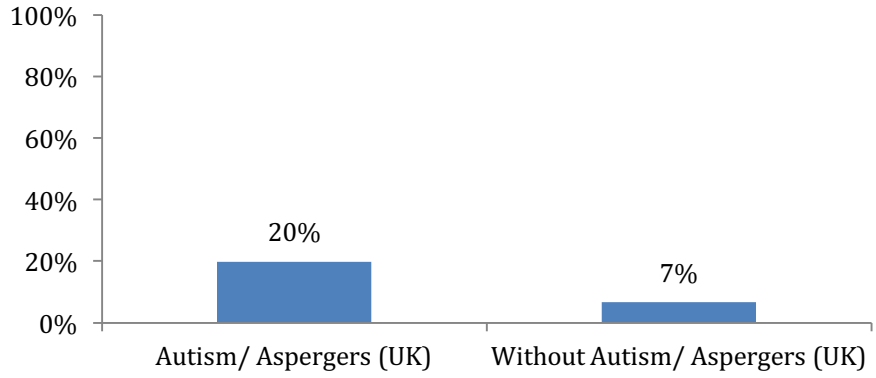


Figure 1.18 (Appendix 1.49) shows the proportion of children who had been bullied by other children at school several or many times, based on information provided by the parent when the child was aged 7 years. CWA were significantly more likely to ahve been bullied several/many times (20%) than COA (7%).

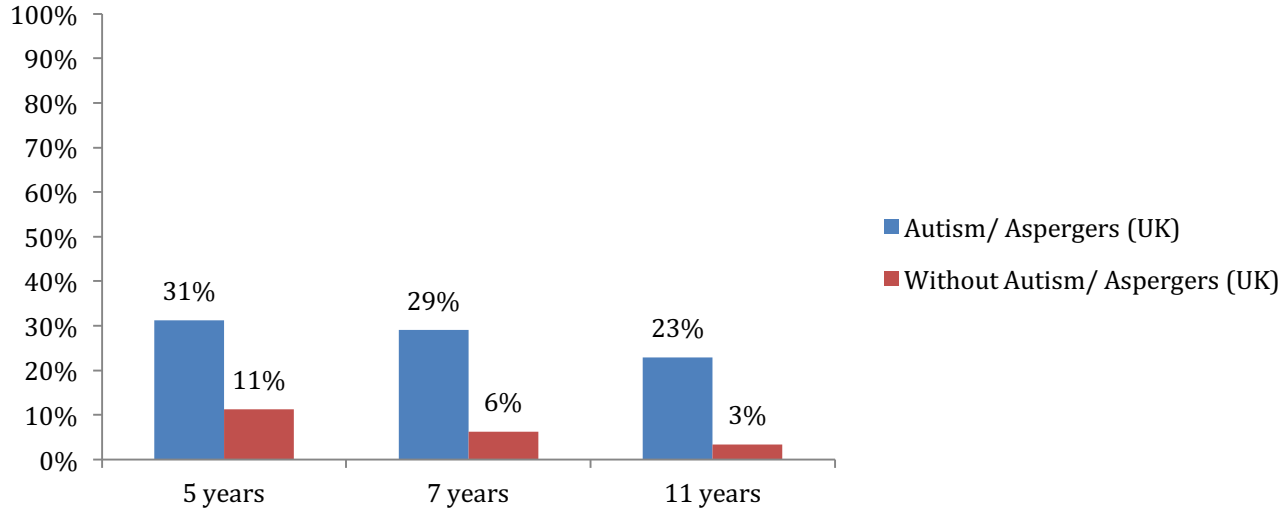
Figure 1.18: Parental reported bullying at school when child was aged 7 years



Friends outside school

A significantly greater proportion of CWA had no friends outside school compared to COA (Figure 1.19, Appendix 1.50)

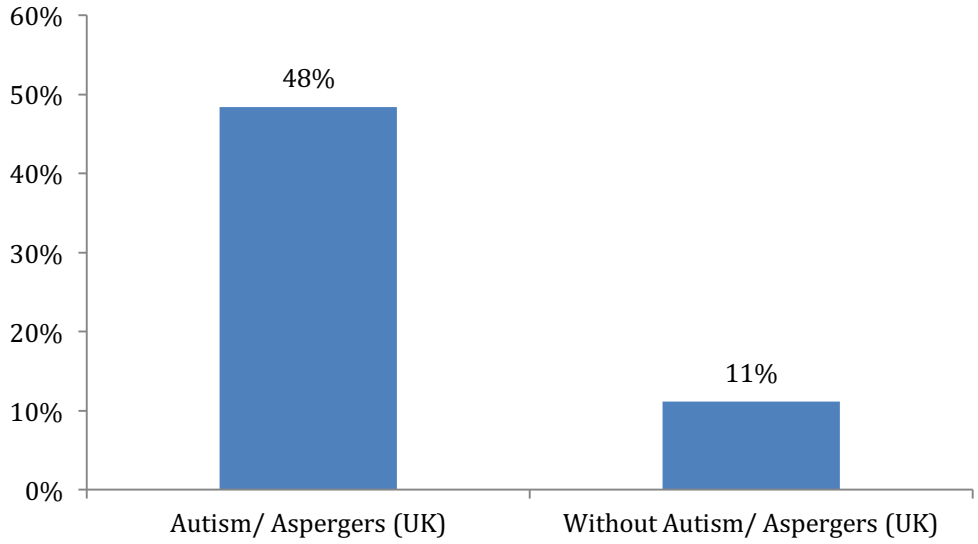
Figure 1.19: Spending no time with peers outside school (ages 5, 7 and 11years)



Parental perceptions about the move to secondary school.

When the children were aged 11 years, the main respondents were asked if they thought the move to secondary school would be 'very easy', 'fairly easy', 'neither easy nor difficult', 'fairly difficult', or 'very difficult' for their child (Figure 1.20; Appendix 1.51). Almost half (48%) of carers of CWA felt the move would be difficult for their child, this percentage was significantly greater and four times the proportion of carers of COA (11%).

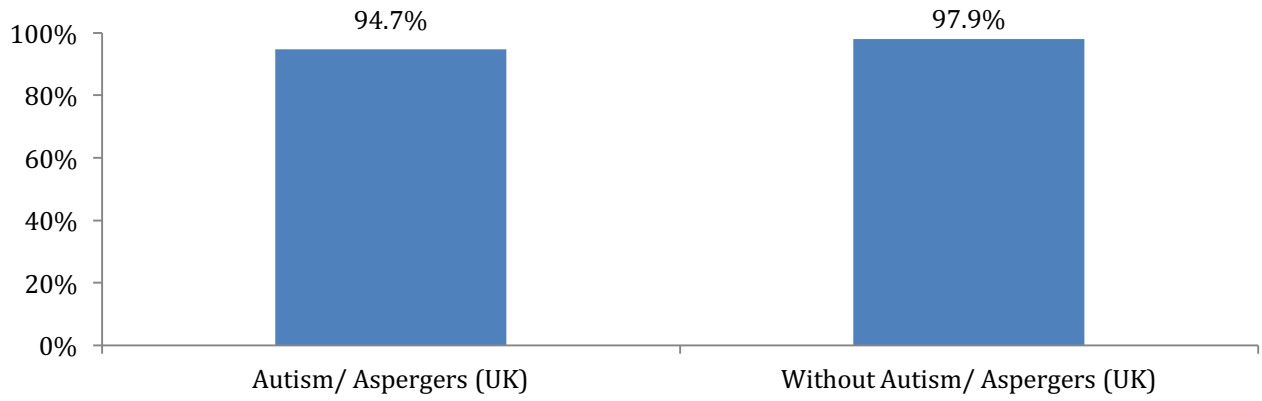
Figure 1.20. Proportion of main respondents who thought the move to secondary school would be 'fairly difficult' or 'very difficult'



Parental aspirations for child's education

When the child was aged 7 years, the main respondent (usually the mother) was asked if they would like their child to stay on at school after the compulsory school age, that is after 16 years of age (Figure 1.21; Appendix 1.52). Generally speaking parents wanted their child to stay on at school regardless of whether the child had a diagnosis of autism/Aspergers or note. There was no statistically significant difference between the proportion of carers of COA (98%) who wanted their child to stay on at school, compared to 95% of parents of CWA.

Figure 1.21: Respondents who wanted their child to stay on at school after the minimum school leaving age



4.2) Schooling for children with ASD

Prevalence of ASD in schoolchildren in NI

Key findings:

The proportion of children with Autism Spectrum Disorder (CWA) in years 1-12 was 1.2% in 2006/07 and increased to 1.8% by 2012/13.

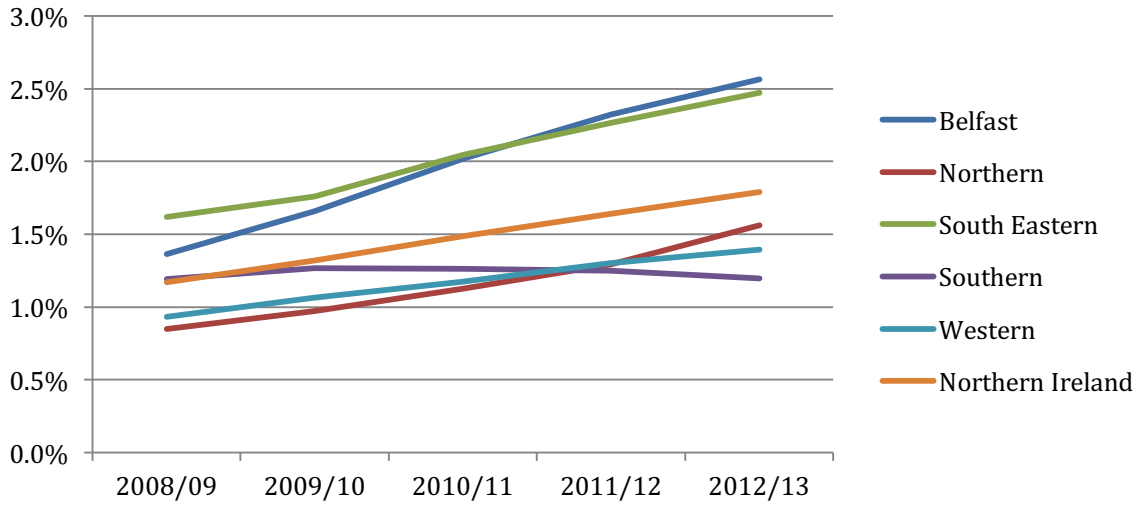
In 2012/13 the proportion of CWA varied across year group, from 1.03% in Year 1, to 2.08% in Year 10, and 1.68% in Year 12.

Pupils recorded as having ASD by year group

Data analysed in this section came from three NI School Censuses: 2006/07, 2009/10 and 2012/13. Figure 2.1 shows the prevalence of ASD over a 5-year period, for all schoolchildren (primary, post-primary and special schools) in all year groups (year groups 1-12) across all of Northern Ireland and broken down for each of the five Health and Social Care Trusts (HSC Trusts). From 2008/09 to 2012/13 overall prevalence rates of ASD in schoolchildren increased from 1.2% to 1.8%; this increase was evident in four out of the five HSC Trusts, with the exception of Southern HSC Trust, where prevalence remained steady at 1.2% - 1.3%. The greatest increase in prevalence rates across time were recorded in the Belfast HSC Trust (increase by 1.2

% points) and South Eastern HSC Trust (increase by 0.9 % points). In 2012/13, the highest autism prevalence rates were recorded in the Belfast HSC Trust (2.6%) and South Eastern HSC Trust (2.5%).

Figure 2.1: Prevalence of ASD for all schoolchildren in NI and by HSC Trust



Prevalence of autism in schoolchildren across time

Figure 2.2 (Appendices 2.2-2.8) shows increased prevalence of autism in schoolchildren for all schools types (nursery, primary, post-primary, and special schools) by year groups, across time. In all three School Censuses, the prevalence of autism was highest in primary-school children when compared to older children. Highest prevalence rates were recorded for primary schools (between school Years 2-7), with a substantial drop of prevalence rates for Years 13 and 14 (lower and upper 6th form). Across all year groups, autism prevalence rose over time.

Figure 2.2: Prevalence of autism for all schoolchildren according to year groups across time

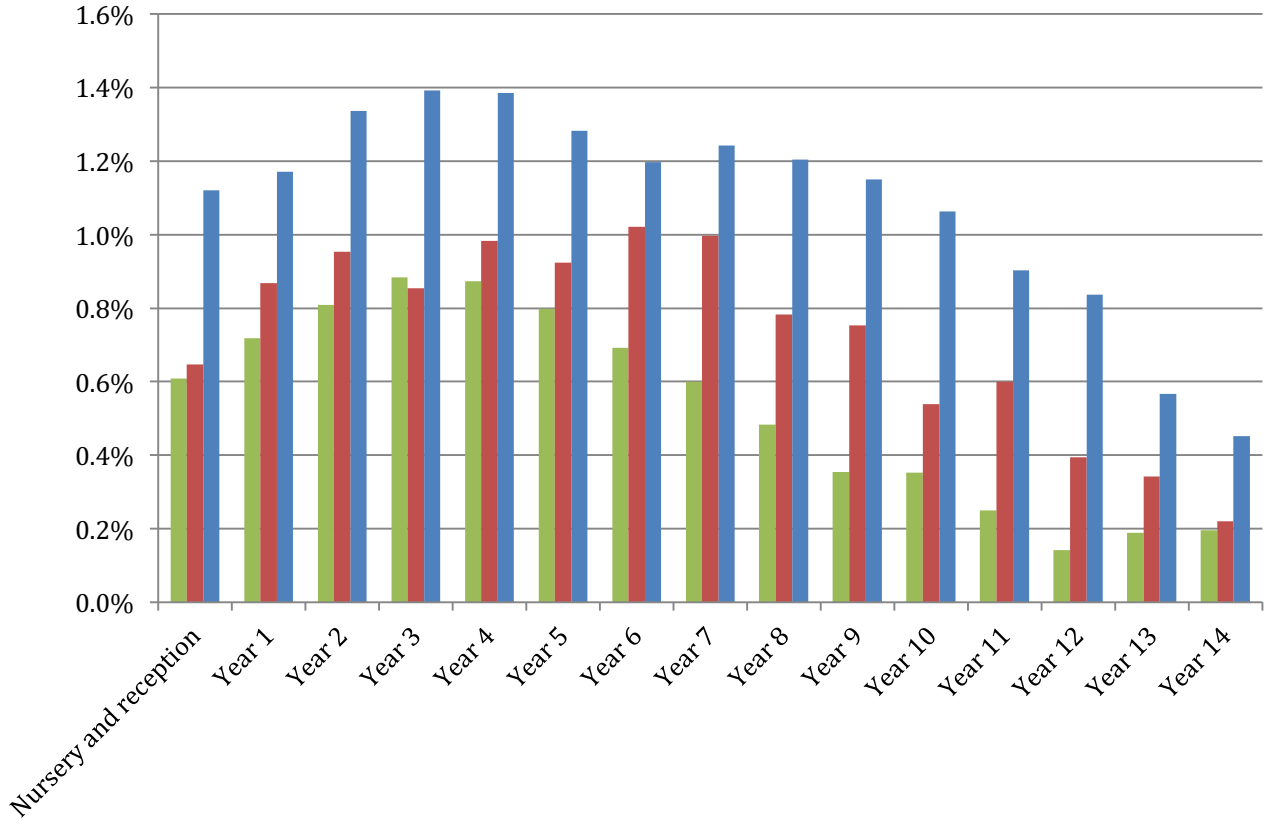
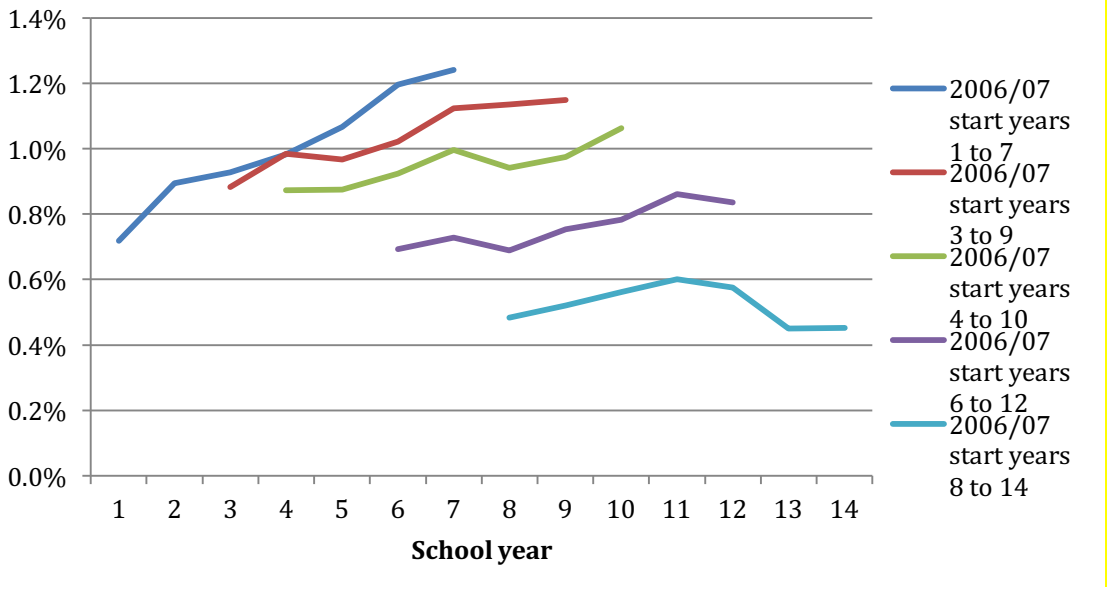


Figure 2.3 (Appendix 2.9) shows how ASD rates changed for cohorts of children across time. Inevitable variability in longitudinal data, e.g. through population shifts, such as immigration or emigration, was assessed and data showed statistical stability, thus, such potential variability had negligible impact on long-term trends in autism prevalence.

Children were tracked across time and ASD prevalence increased as children progressed from year 1 to year 7, indicating that children who started school without ASD diagnosis were diagnosed with ASD as they grew older (Figure 2.3). This was true irrespective of the age (school year) of the children at the time of the first data point (2006/07); i.e., in all year groups, ASD prevalence increased over time, albeit rates were lower for the older children.

Figure 2.3: Longitudinal prevalence of autism across a sample of school cohorts



Prevalence of Asperger's Syndrome in schoolchildren

While the diagnosis of Asperger's Syndrome no longer features in the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM 5) (American Psychological Association, APA; 2013), it remained a diagnostic category in International Classification of Diseases 10th revision (ICD-10) (World Health Organisation, 1992). The Annual School Censuses available for secondary analysis were conducted before publication of DSM 5 and therefore differentiate between autism and Asperger's Syndrome. The following section presents disintegrated data for Asperger's Syndrome.

Figure 2.4 (Appendices 2.2 – 2.8) shows that the pattern of prevalence rates of Asperger's Syndrome across year group were relatively similar for each of the School Censuses, i.e., similar increases occurred as the children grew older, with similar decreases for Years 13 and 14. Notable exceptions in the earlier data (2006/07) were a quite a steep decrease from Year 9 onwards and, in the most recent Census (2012/13), a substantial peak in Year 10 (from 0.8% in Year 9 to 1.02% in Year 10). These findings seem to indicate that recently more children with Asperger's Syndrome stayed at school for longer (after compulsory school age) and that more children with Asperger's Syndrome were not identified until they reached Year 10 (aged 13-14 years).

Figure 2.4: Prevalence of Asperger's Syndrome for cohorts of pupils over time.

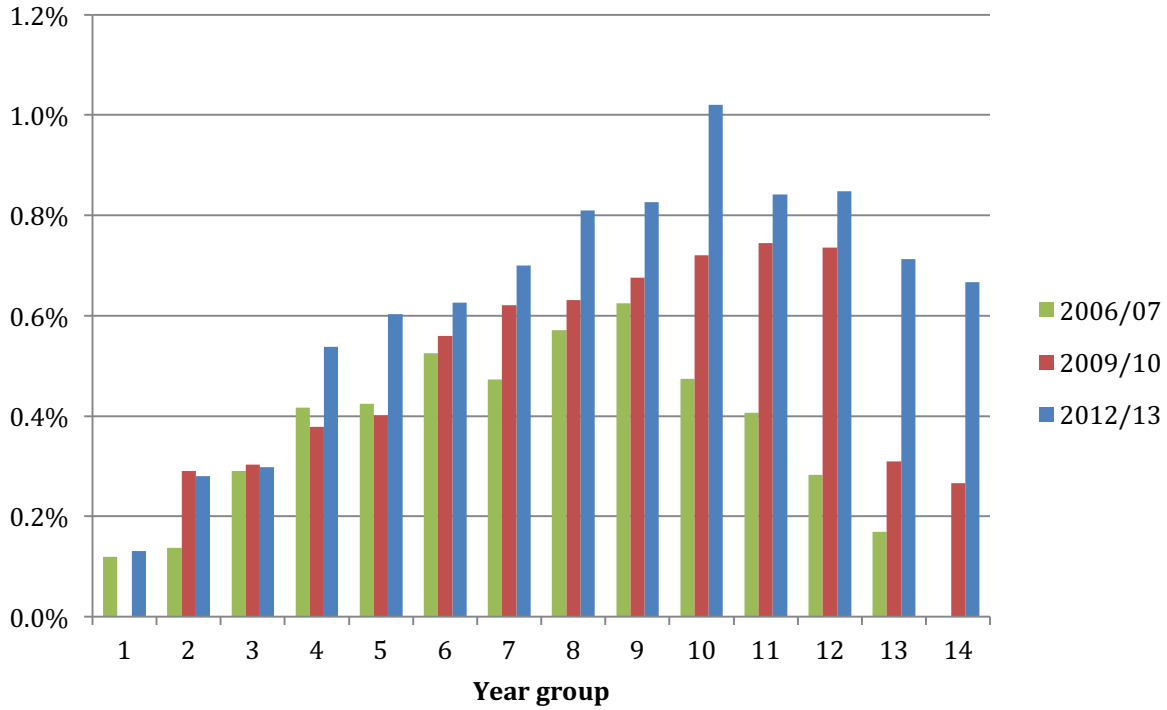
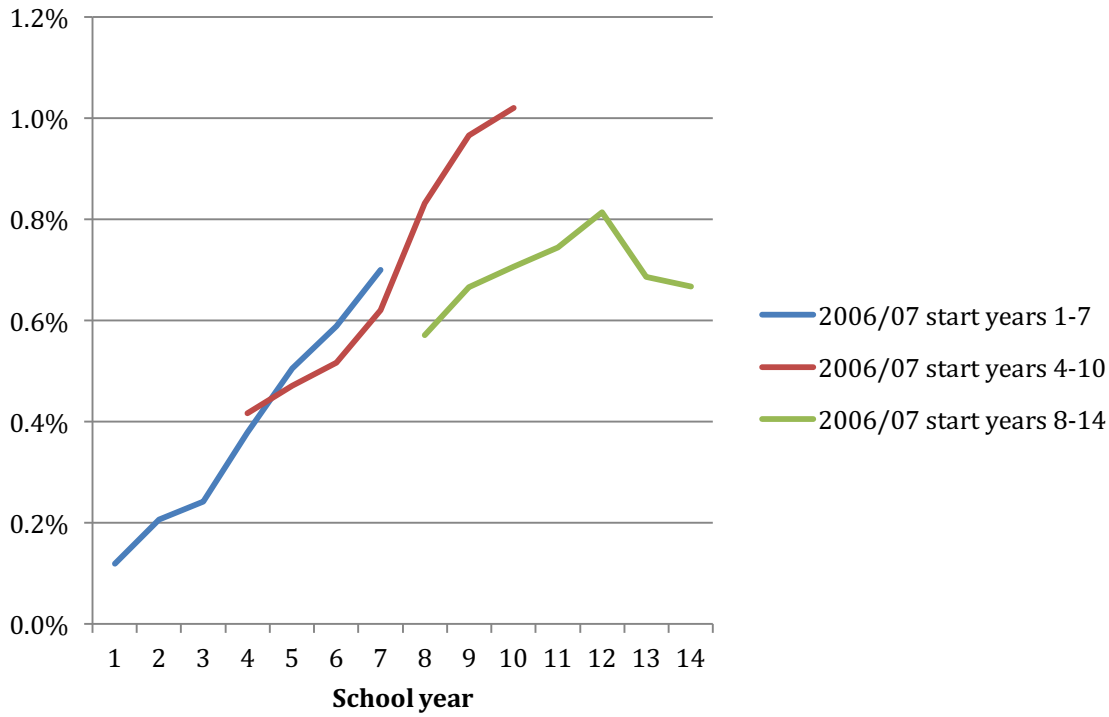


Figure 2.5 (Appendix 2.10) tracks three cohorts of schoolchildren (Year 1, 4 and 8 in 2006/07) across all three of the School Censuses and shows the prevalence of Asperger's Syndrome in these children. These data show that the prevalence of Asperger's Syndrome started at a lower level than that for ASD but rose more steeply with age (for comparison see Figures 2.3 and 2.4). Similar to ASD, the prevalence of Asperger's Syndrome dropped after compulsory school age, evidence that a somewhat lower proportion of students with Asperger's Syndrome stayed on at school.

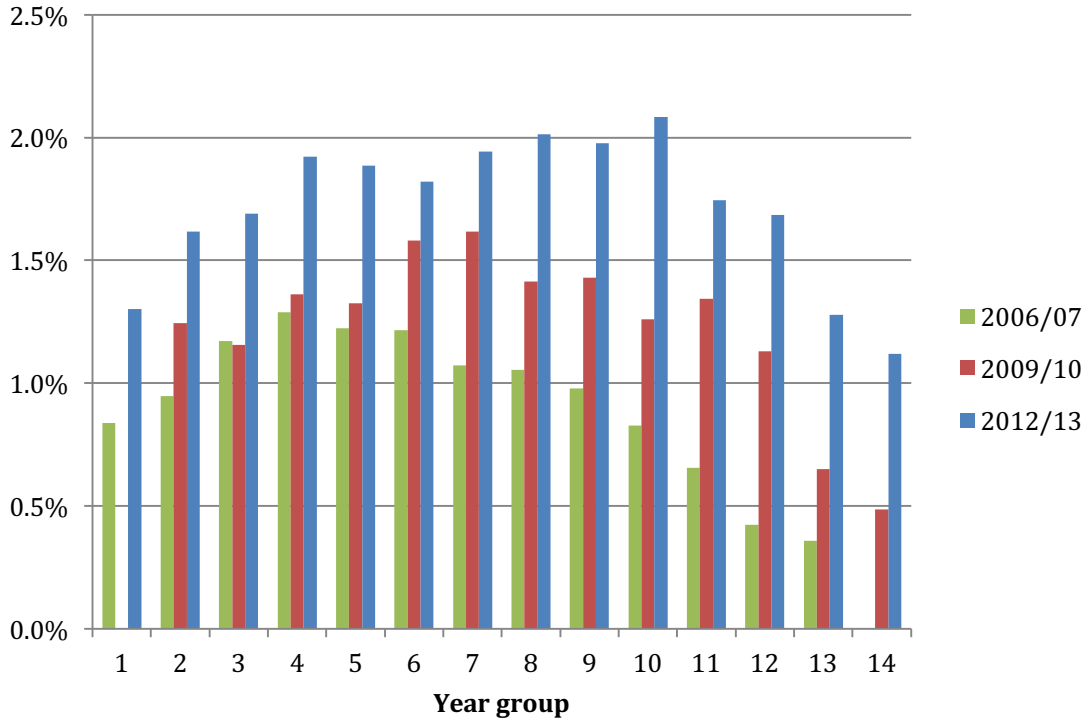
Figure 2.5: Prevalence of Asperger's Syndrome across a sample of school cohorts.



Prevalence of Autism and Asperger's in schoolchildren

Figure 2.6 (Appendices 2.2 – 2.8) shows that the prevalence rates for autism and Asperger's increased substantially across each of the School Censuses. In fact, in the most recent census (2012/13), Autism and Asperger's prevalence in year 10 had risen to 2.08%, equating to 1 in 48 children. This is considerably higher than the prevalence rate of 0.83%, equating to 1 in 120 children, for the same year group in 2006/07.

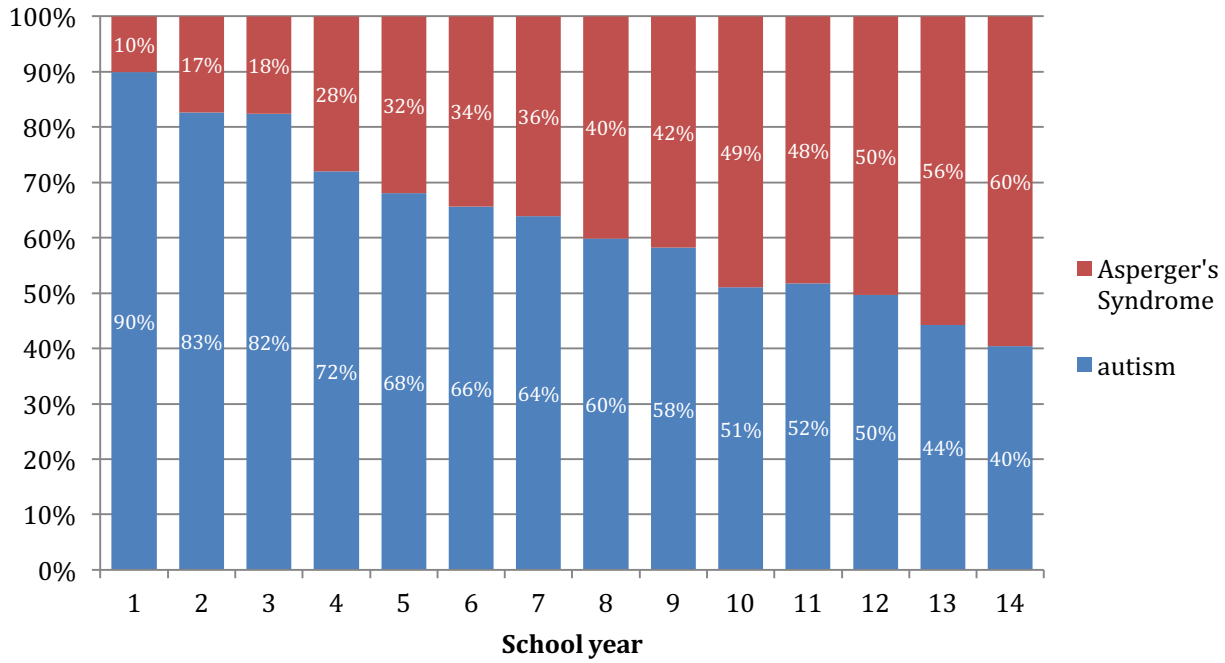
Figure 2.6: Prevalence of Autism and Asperger's across a sample of school cohorts.



The following section presents disintegrated data for Autism.

Differential trends in diagnosis and enrolment for all children on the Autism spectrum were reflected in the most recent data sets (2012/13) (Figure 2.7; Appendices 2.18). While significantly more of the younger children had a diagnosis of autism (90%) rather than Asperger's Syndrome (10%), the situation was the reverse for the older children, i.e., 40% were diagnosed with autism while 60% were diagnosed with Asperger's Syndrome. This pattern may reflect the historical tendency for Asperger's Syndrome to be diagnosed later in life (Mandell, Novak, & Zubritsky, 2005) or a more recent tendency, possibly a reflection of the run up to the new DSM5 (APA, 2013) that used the overarching term ASD, and diagnosticians starting not to use the diagnostic label 'Asperger's Syndrome' but instead to use the term 'Autism Spectrum Disorder'.

Figure 2.7: Autism and Asperger's Syndrome across school years



School Type

Key findings:

Proportion of children with autism attending special schools has decreased. In 2006/07, 43% (N=751) children with autism attended special schools; in contrast to 35% (N=1,255) in 2012/13.

In 2006/07, amongst children with Asperger's Syndrome 7% (N=80) attended special schools; in

In the following sections, data were reported separately for children with autism and children with Asperger's Syndrome who attended special schools.

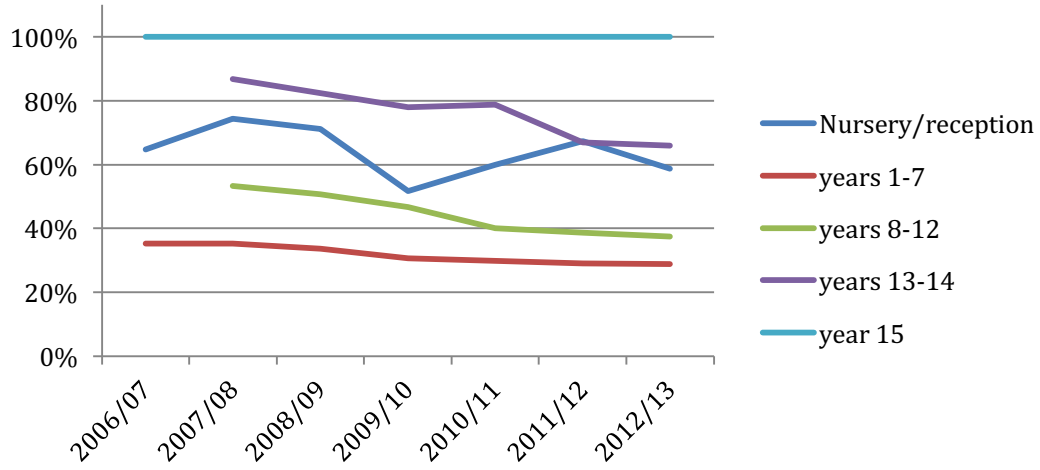
Children with Autism in Special School

Figure 2.8 (Appendices 2.11 – 2.17) shows that over the period from 2006/07 to 2012/13, the proportion of children diagnosed with autism, who were enrolled in special schools at primary school age (Years 1 to 7), decreased from 35.2% to 28.8%, while the proportion of children diagnosed with autism enrolled in mainstream primary schools increased from 64.8% to 71.2%.

For post-primary school aged children diagnosed with autism, reductions in special schools were even greater; i.e., for years 8-12 (end of compulsory school age) numbers decreased from 53.2% to 37.5%; for years 13-14 (lower and upper 6th forms) numbers decreased from 86.8% to 66.0% (NB. These figures are based on 2007/08 and 2012/13 School Censuses. Data prior to the 2006/07 Census were not available as they were collected at aggregated level only). The nursery school figures for children with autism in mainstream education tended to fluctuate year on year.

The data also revealed that, historically, the higher the school year group (with the exception of nursery), the more likely the child was to be in a special school. However, the decline in the proportion of students with autism in special schools in years 8-12 and 13-14 reduced the difference between these year group bands and year groups 1-7.

Figure 2.8: Proportion of children diagnosed with autism attending special school by year group



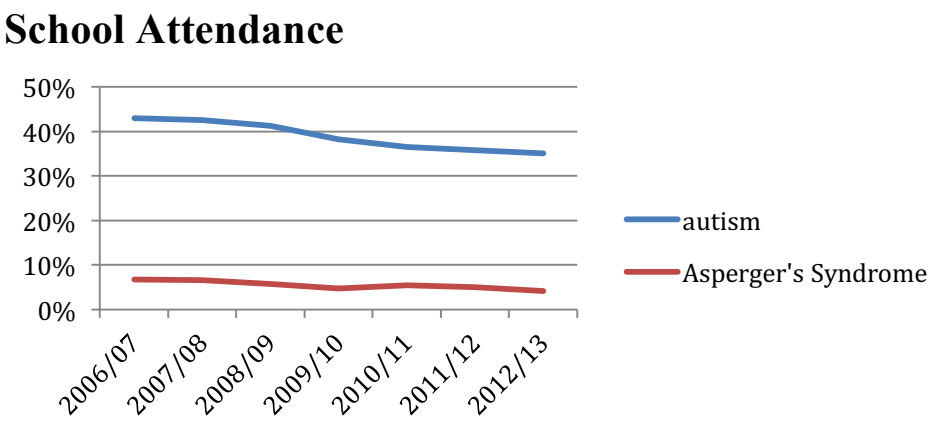
Children with Asperger's Syndrome in Special School

Due to the small number of children with Asperger's Syndrome attending special schools it was not possible to break the data down by year groups.

Figure 2.9 (Appendices 2.11 – 2.17), presents the overall proportion of children with autism vs Asperger's Syndrome attending special school across all age groups. Over

the period 2006/07 to 2012/13, a much greater proportion of children with autism attended special school compared to children with Asperger's Syndrome, (31 – 36 percentage point difference). During the seven-year period of available School Census data, the proportion of children with Asperger's Syndrome in special schools reduced from 6.8% to 4.1%.

Figure 2.9: Proportion of children with autism or Asperger's Syndrome attending special schools



School attendance and reason for absence

Key findings: 2009/10 to 2011/12

- Children with autism had lower attendance rates in primary/post-primary school, compared to COA.
- Children with Asperger's Syndrome had lower attendance rates in primary school, relative to COA; by contrast, until recently (2011/12) the post-primary attendance of children with Asperger's Syndrome matched that of COA.
- Attendance of children with Asperger's Syndrome in special schools was 4-7 percentage points lower than attendance of children with Asperger's Syndrome attending mainstream schools (they missed an additional 8-13 days).
- The main reason for absences amongst CWA in primary school was illness. The main reason for absence rates in post-primary school for CWA was unauthorised absence (2009/10), and illness (2011/12).
- Generally, duration of primary school absence of CWA was considerably longer than for COA; i.e., CWA missed about half a week every year more school than other children.

Primary School Attendance

Overall, attendance in Primary Schools improved between 2009/10 and 2011/12 (Figure 2.10; Appendices 2.38 – 2.46) for children with autism (from 93.6% to 94.2%), children with Asperger's Syndrome (from 93.7% to 94.0%), and COA (from 94.7% to 95.2%). Attendance was at least 1% point higher for COA than for children with autism or Asperger's Syndrome. This equated to COA attending an additional 2 – 2.5 days of the school per year, compared to CWA.

Figure 2.10: Attendance in primary schools

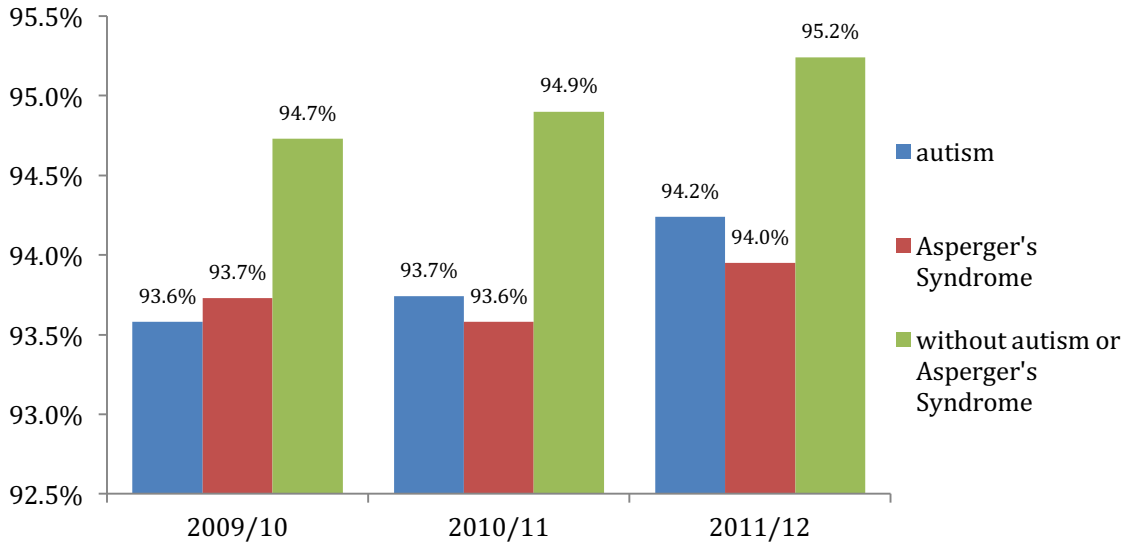
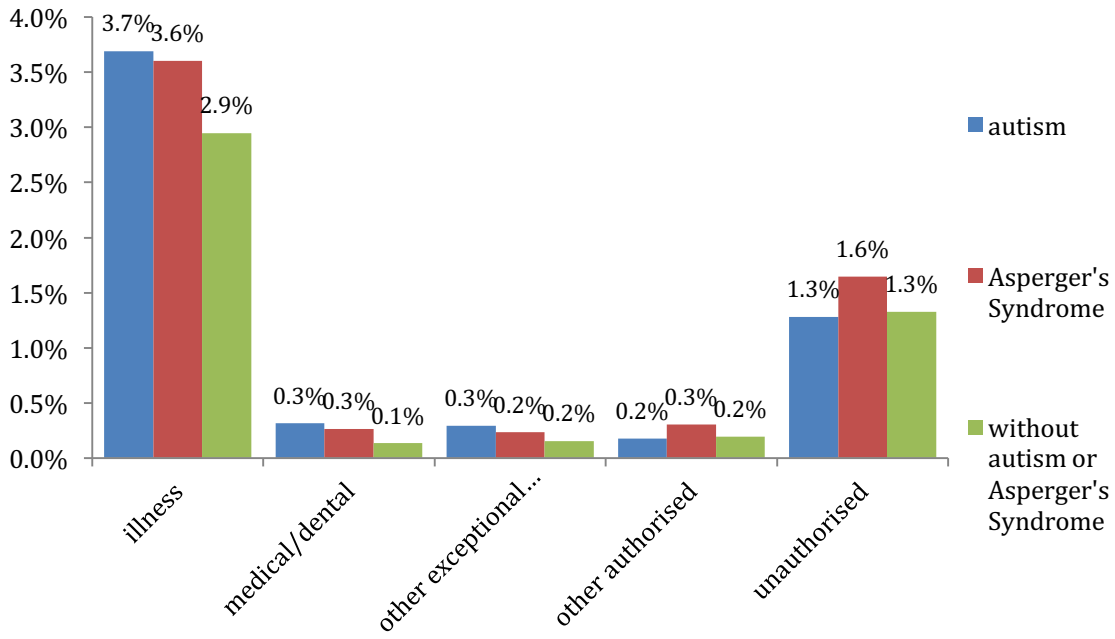


Figure 2.11 shows the reasons for non-attendance in primary schools in 2011/12. The main reason for lower attendance rates of children with autism or Asperger's Syndrome was illness. This pattern was consistent with the previous two academic years (Appendices 2.38 – 2.46). Children with autism were also more likely to miss school due to medical/dental reasons or other exceptional circumstances, although these reasons did not greatly affect overall absenteeism.

In 2011/12, children with Asperger's Syndrome had a slightly greater proportion of unauthorised half-day absences (1.6%), compared to COA (1.3%). While this pattern was similar in 2010/11, it reflected a rise in unauthorised absences for children with Asperger's Syndrome since 2009/10, when unauthorised absenteeism had been similar across the three groups.

Figure 2.11: Reasons for absenteeism from primary schools (2011/12)

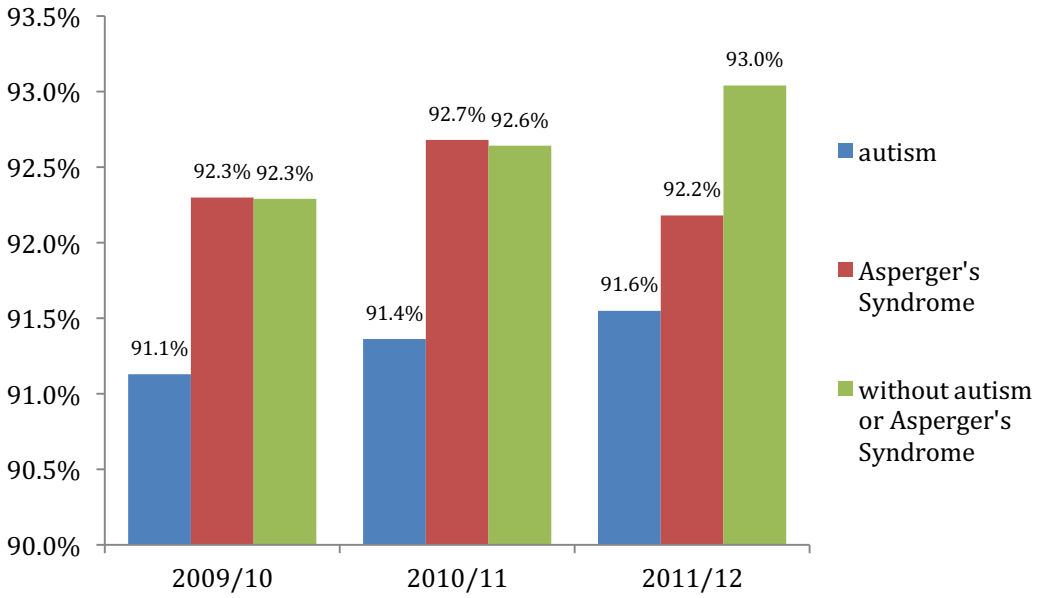


Post-primary School Attendance

In general, attendance improved slightly for post-primary CWA and COA over the period 2009/10 to 2011/12 (Figure 2.12; Appendices 2.38 – 2.46). For example in 2009/10, children with autism were present for 91.1% of school half days and this attendance figure rose to 91.6% by 2011/12. Similarly, children without autism or Asperger Syndrome attended 92.3% of school half days in 2009/10, and their attendance rate rose to 93.0% in 2011/12. In 2011/12, the gap in attendance rate between children with autism and COA was 1.5 percentage points. This meant that post-primary children with autism missed school nearly 3 days per year more than did COA.

Children with Asperger's Syndrome attended 92.3% half days in 2009/10 and 92.7% in 2010/11, similar to the attendance record for COA. While their attendance in 2011/12 still exceeded that observed for children with autism, their attendance no longer matched that of COA.

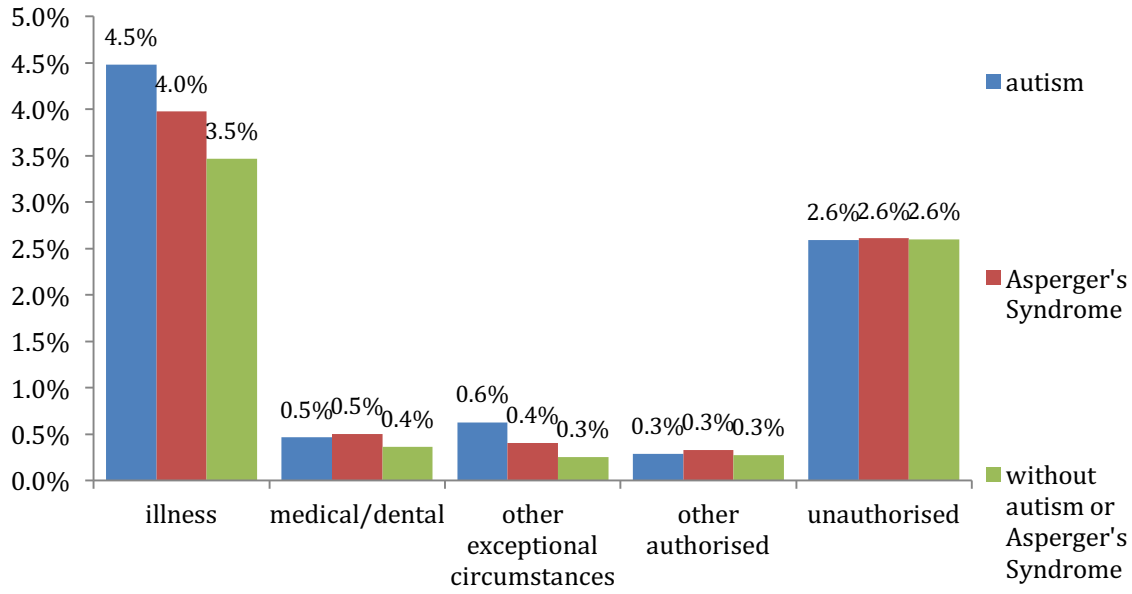
Figure 2.12: Attendance in post-primary schools



In 2011/12, the highest rate of post-primary absenteeism due to illness was seen amongst children with autism (4.5%), followed by children with Asperger's Syndrome (4.0%), while the illness rate amongst COA was 3.5% (Figure 2.13). The tendency for CWA to have a greater number of absences due to illness increased over the years, from small differences in 2010/11 and no differences in 2009/10 (Appendices 2.38 – 2.46).

While in 2011/12 unauthorised absence levels were the same for all three groups (2.6%), this had not always been the case. In 2009/10 and 2010/11, children with autism had 0.6% more unauthorised absences than COA, and 0.8-1.0% more than children with Asperger's Syndrome. While not affecting overall absenteeism to the same extent, medical/dental, and other exceptional circumstances also led to lower attendance rates for CWA over the period 2009/10 to 2011/12.

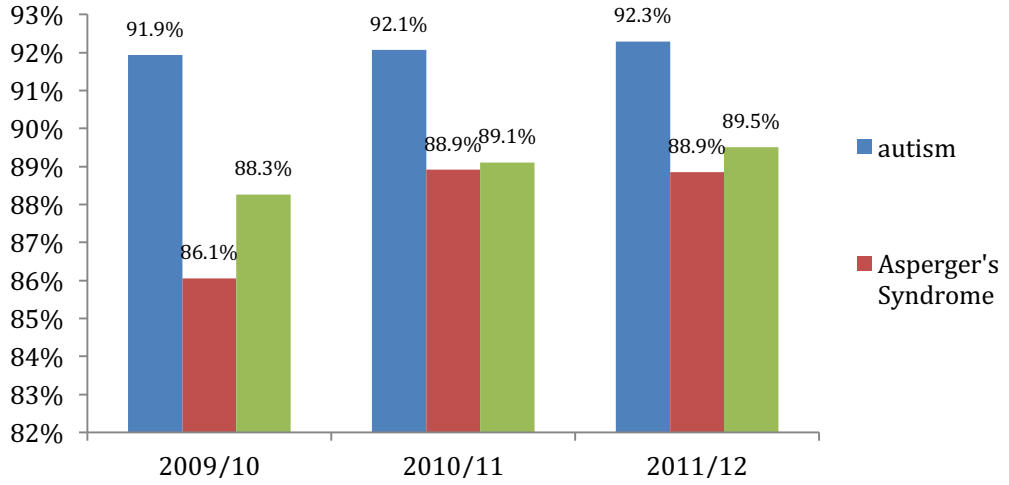
Figure 2.13: Reasons for absenteeism from post-primary schools (2011/12)



Special School Attendance

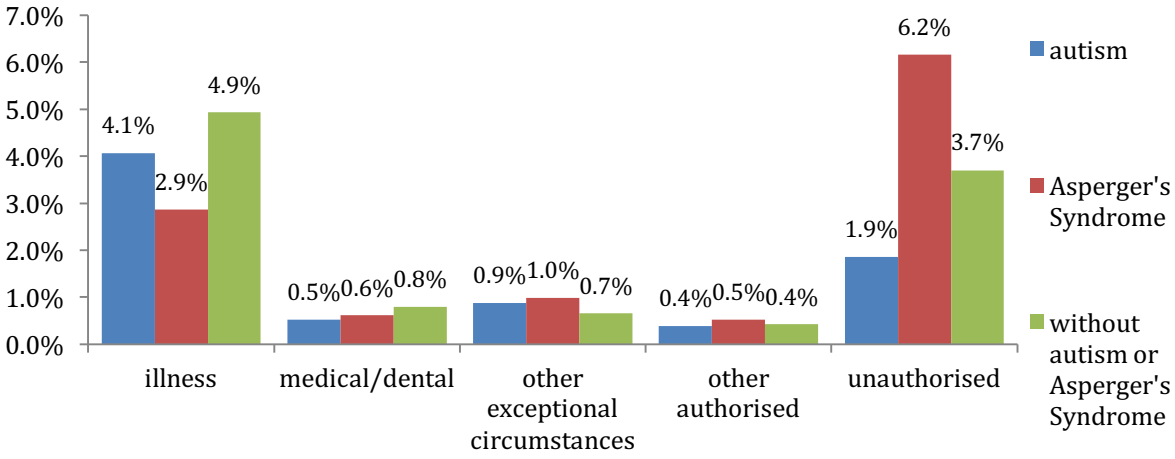
Special school attendance (measured in half-days) included both primary and post-primary school aged children (Figure 2.14; Appendices 2.38 – 2.46). Similar to mainstream primary and post-primary schools, attendance rates generally improved in special schools for children with autism (from 91.9% to 92.3%), Asperger's Syndrome (from 86.1% to 88.9%) and children with special needs other than autism (88.3% to 89.5%) over the period 2009/10 to 2011/12. Evidently, compared to children with other special needs, children with autism had better attendance rates, while children with Asperger's Syndrome had the lowest attendance rates.

Figure 2.14: Attendance in special schools



In 2011/12, illness was the main reason for school absence of children with autism (4.1%), while 6.2% of absenteeism of children with Asperger's Syndrome remained unexplained or unauthorised (Figure 2.15; Appendices 2.38 – 2.46).

Figure 2.15: Reasons for absenteeism from special school (2011/12)



Overall School Attendance of CWA

Figure 2.16 (Appendices 2.38 – 2.46) shows attendance data combined across all year groups and all school types for all CWA. Attendance rates for all CWA was higher in mainstream schools when compared to special schools; for children with autism the difference was around 1 % points, while for children with Asperger's Syndrome the difference was between 4-7 % points. In terms of actual school days missed, this means that children with Asperger's Syndrome in special schools missed the equivalent of 8-13 school days (about 2-3 weeks) more than children with Asperger's Syndrome in mainstream schools.

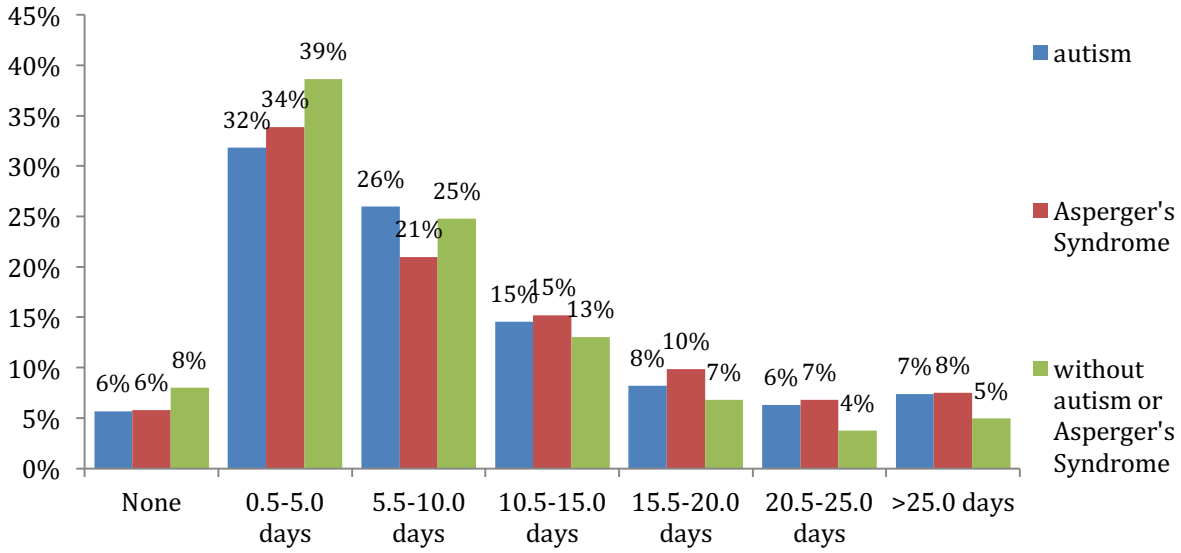
Figure 2.16: Attendance in all schools for all age-groups for all CWA

Duration of absence from Schools

Duration of absence in Primary Schools

Figure 2.17 (Appendices 2.53 – 2.55) shows that only 6% of CWA and 8% of COA did not miss a single day at school in 2011/12. The vast majority of children were absent from school for short periods of time (< 2 school weeks per school year), although consistently, CWA were absent from school for longer periods than COA; both children with autism and children with Asperger's Syndrome were more likely to be absent for longer periods (more than 5 days) than to COA (by 9% points and 7% points respectively). Figures were similar for 2009/10 and 2010/10.

Figure 2.17: Duration of absence for post-primary school

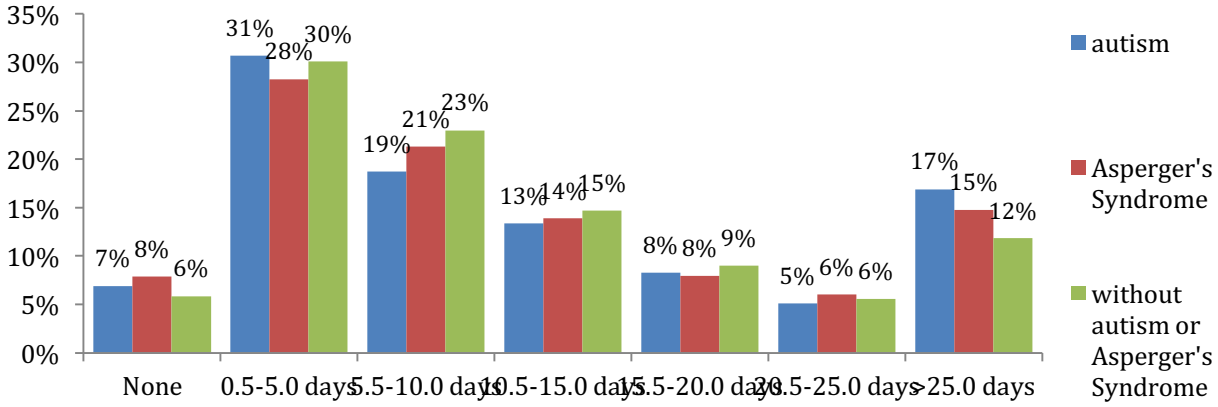


Duration of absence in Post-Primary Schools

In post-primary schools in 2011/12, the profiles regarding duration of absence from school follow a similar pattern, with most children being absent for relatively short periods of time (< 2 weeks per year) (Figure 2.18; Appendices 2.53 – 2.55).

However, considerably more CWA were absent from school for longer (> 5 weeks) than COA.

Figure 2.18: Duration of absence for post-primary school



School Attendance by Education and Library Board

Key points

NEELB had the best primary/ post-primary attendance rates out of the five ELBs for children with autism, however attendance rates of children with Asperger's Syndrome were very low.

In SELB school attendance of CWA were lowest while school attendance of COA was good.

In BELB primary CWA had similar attendance rates to COA. This trend continued for children with Asperger's Syndrome in post-primary school, while the attendance of children with autism lagged behind.

In WELB and SEELB primary school CWA had considerably lower attendance rates than COA, while post-primary school attendance of pupils with Asperger's Syndrome was good.

Primary School Attendance by Education and Library Boards

Figures 2.19-2.21 (Appendices 2.47 – 2.52) show attendance rates for primary schools across three consecutive years for all Education and Library Boards (ELB). For children with autism, the North Eastern ELB (NEELB) consistently had the best attendance rate. By contrast, the Southern ELB (SELB) had the poorest attendance record for children with autism. In BELB, attendance rates for children with autism were comparable to those of COA over this period. In fact, in 2010/11, BELB children with autism actually had a better attendance rate than COA.

While having the best attendance rate for children with autism, NEELB had the poorest attendance rates for children with Asperger's Syndrome (92.6%) out of the five ELBs in 2011/12. From 2009/10 to 2011/12, there was also considerable discrepancy between the attendance of children with Asperger's Syndrome and COA in NEELB, and in 2009/10 and 2010/11 the SELB had poorer attendance for children with Asperger's Syndrome. In BELB, WELB, and SEELB from 2009/10 to 2011/12, generally speaking, the attendance of children with Asperger's Syndrome did not differ greatly from that of COA.

Figure 2.19: Attendance in primary schools by Education and Library Board (2009/10)

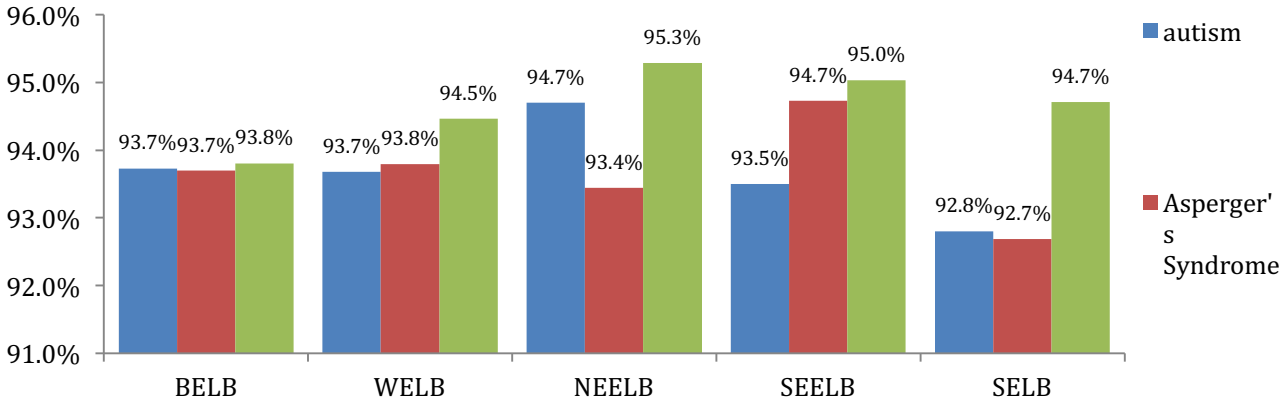


Figure 2.20: Attendance in primary schools by Education and Library Board (2010/11)

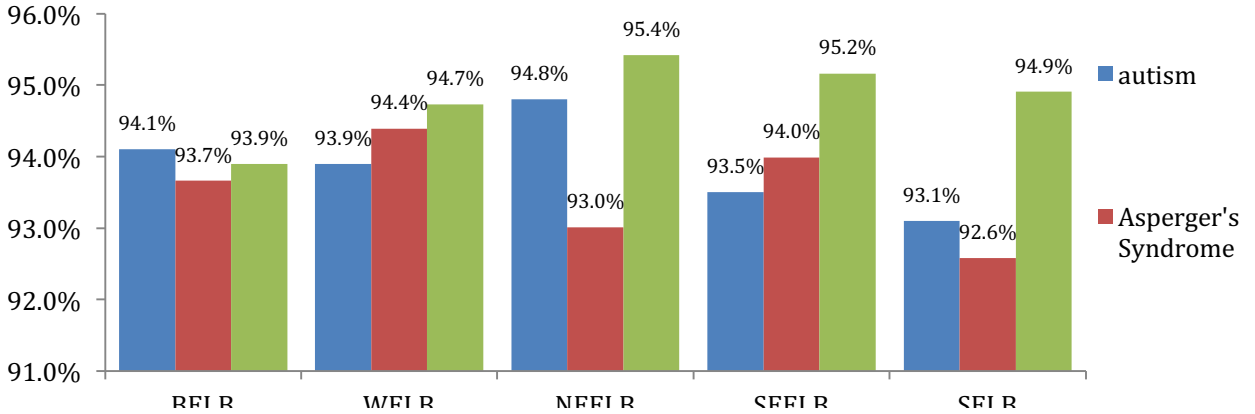
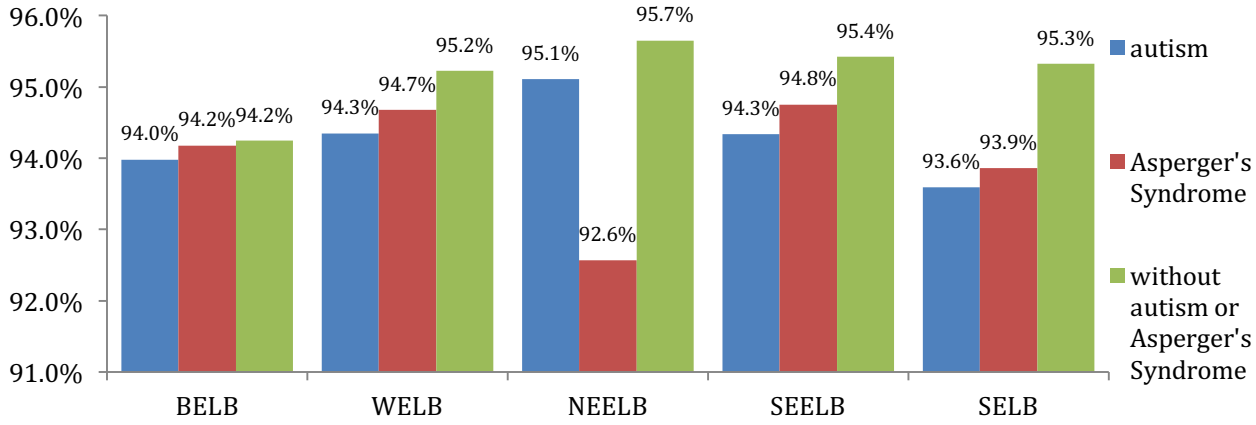


Figure 2.21: Attendance in primary schools by Education and Library Board (2011/12)



Post-primary School Attendance by Education and Library Boards

Figures 2.22-2.24 (Appendices 2.47 – 2.52) show attendance rates for post-primary schools across three consecutive years for all Education and Library Boards (ELB).

These data highlight that in NEELB the post-primary attendance rates in 2011/12 were actually higher for children with autism (93.8%) than for COA (93.2%) and that across all three year, attendance rates for children with autism in NEELB were 1-2 percentage points higher than in any of the other ELBs.

The attendance rates of children with autism within the other four ELBs ranged from 90.7% to 91.9% in 2011/12. BELB had better attendance rates for children with autism than SELB, SEELB, and WELB in 2011/12; however, this was not the case for the previous years.

The attendance of children with Asperger's Syndrome in BELB was generally at a similar level to that of COA; in WELB and, even more so, in SEELB attendance rates of children with Asperger's Syndrome actually exceeded those of COA. While the attendance of children with autism was good in NEELB, the attendance of children with Asperger's Syndrome lagged behind. In SELB generally attendance rates of CWA was poor when compared to COA and other ELBs.

Figure 2.22: Attendance in post-primary schools by Education and Library Board (2009/10)

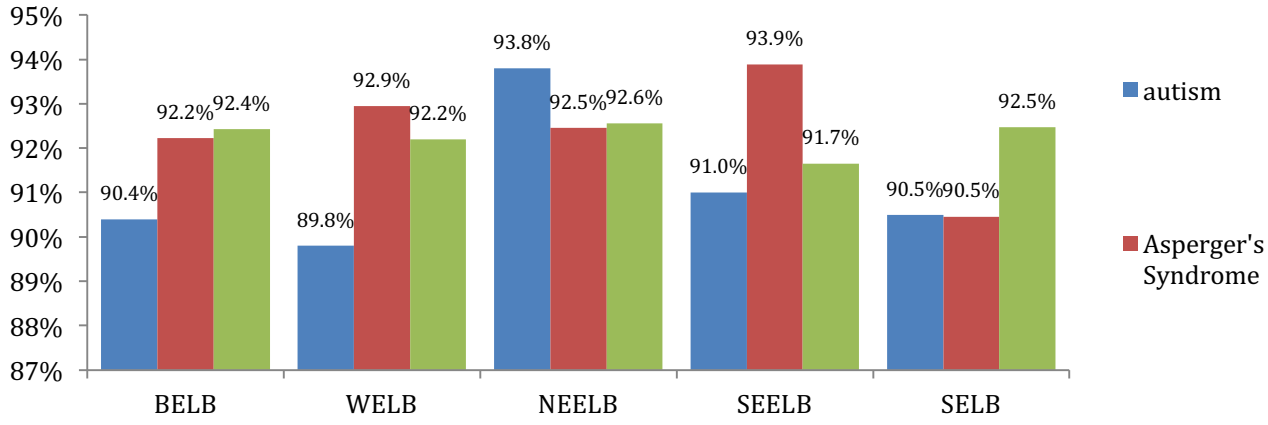


Figure 2.23: Attendance in post-primary schools by Education and Library Board (2010/11)

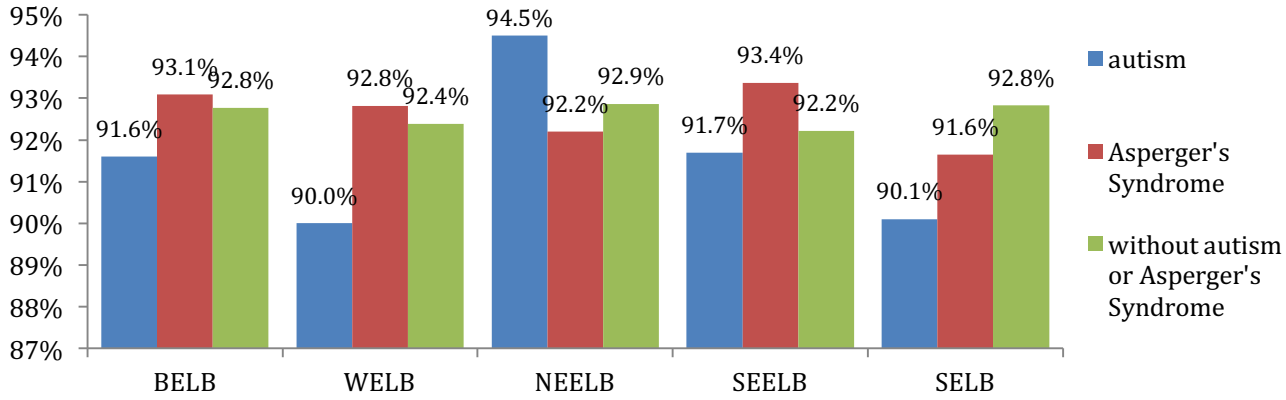
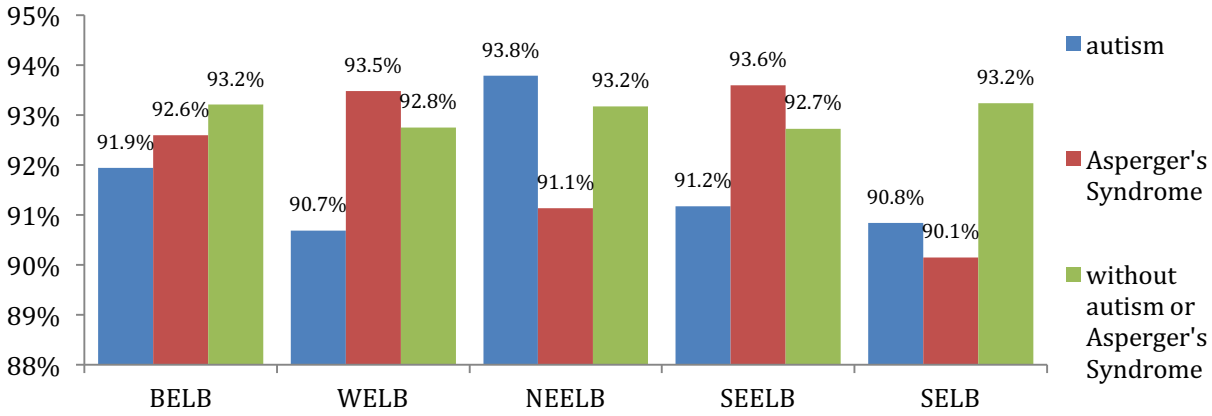


Figure 2.24: Attendance in post-primary schools by Education and Library Board (2011/12)



Socio economic status

Key findings:

Over the past 7 years, the number of children who are eligible for free school meals nearly doubled and the differential between CWA and COA grew substantially.

In primary schools in 2012/13, nearly 6% points more CWA than COA are eligible for free school meals.

In post-primary schools in 2012/13, over 6% points more CWA than COA are eligible for free school meals.

The Northern Ireland Multiple Deprivation Measure evidenced an increase over time of CWA living

Given that no direct measures of Social Economic Status were available for analysis of poverty and ASD, two different indirect measures were used. First, the register of free school meals, and second, the Northern Ireland Multiple Deprivation Measure (NIMDM).

Eligibility for free school meals

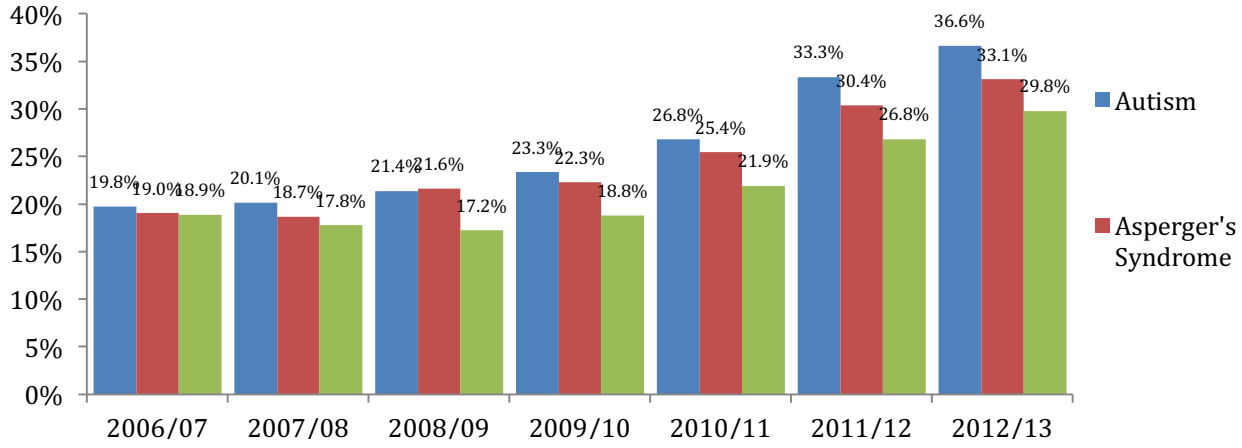
Children in Northern Ireland are entitled to receive free school meals, if their parent(s) fulfil one of several income related criteria (NI Direct, 2014), e.g., their family being on income support or income-related employment and support allowance or in receipt of support under the Immigration and Asylum Act or child or working tax credit, and have an annual income of less than £16,190, or have a statement of special educational needs and requiring a special diet. Therefore, eligibility for free school meals is used frequently as an indicator of poverty (see Hobbs & Vignoles, 2010). Free school meals data were used in the following section to identify differences in socio-economic status between CWA and COA.

Data on eligibility for free school meals were included in the School Censuses for mainstream primary and post-primary schools only; data for special schools were not available in validated format and therefore cannot be reported here (these data are included in appendices 2.19-2.25). Information on the school meals census data collection procedures can be found on the DENI website.

Data were confounded by the fact that, irrespective of income, children with a Statement of SEN who require a special diet, were eligible for free school meals.

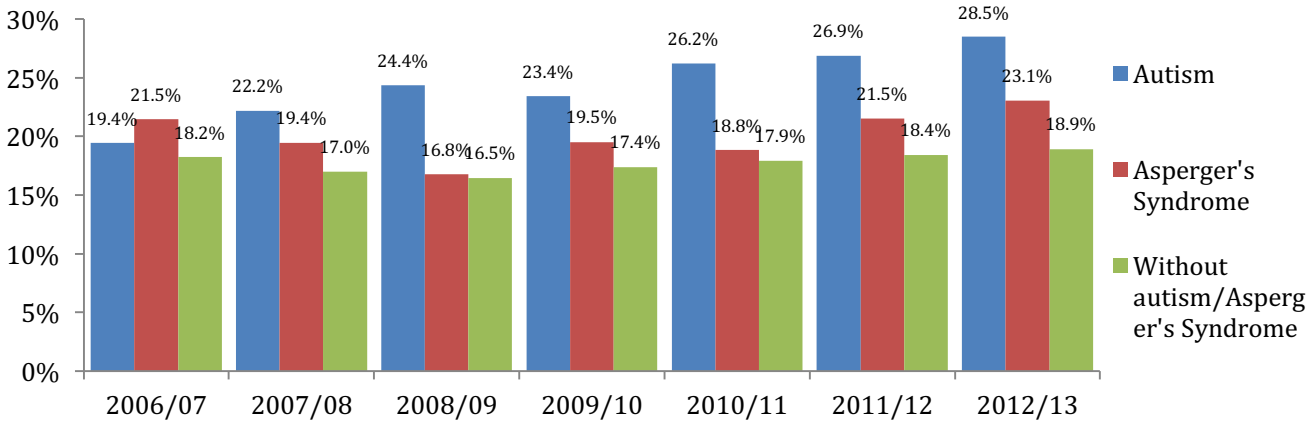
Figure 2.25 (Appendices 2.19-2.25) shows data for primary school aged children, including nursery, reception, and Year 1-7 classes. In 2006/07, the entitlement for free school meals was similar for children with autism, children with Asperger's Syndrome and COA (19.8%, 19.0%, and 18.9%, respectively). However by 2012/13, the overall figures had nearly doubled and a gap had developed between children with autism, children with Asperger's Syndrome and COA, i.e., the respective figures of eligibility for free school meals were 36.6%, 33.1%, and 29.8%.

Figure 2.25: Proportion of primary-school pupils entitled to free school meals



The same trend also was evident in post-primary schools, i.e. in 2006/07 free school meal entitlement rates were similar for children with autism (19.4%) and COA (18.2%) (Figure 2.26; Appendices 2.19-2.25), but by 2012/13, a near 10% point gap had developed between children with autism (28.5%) and COA (18.9%). The trend in free school meals eligibility amongst students with Asperger's Syndrome was rising, but in a less consistent pattern.

Figure 2.26: Proportion of post-primary CWA and COA who are entitled to free school meals



Northern Ireland Multiple Deprivation Measure

The Northern Ireland Multiple Deprivation Measure (NIMDM) was included in the Annual School Censuses and provided a composite measure of deprivation; it covers 7 measures of deprivation: family income; employment; health and disability; education, skills and training; proximity to services, living environment; and crime and disorder.

Based on the NIMDM and using the Electoral Ward in which the child lived, DENI classified four deprivation bands (i.e., quartiles), from most deprived (Quartile 1) to least deprived (Quartile 4). In contrast to the Free School Meals registers that provided an indication of deprivation at the family level, NIMDM was an area-based measure, i.e., it indicated if the child lived in an area of deprivation. Therefore, if a child was grouped into the lowest quartile band on the NIMDM, this did not necessarily mean that they came from a family on low income. Rather, it meant that they lived in an area that was considered most deprived compared to other areas. In the following analysis, this area-based measure was used to assess relationships between living in a deprived area, being diagnosed with ASD, and education.

Figures 2.27 and 2.28 (Appendices 2.26 – 2.33) show the distribution of CWA and COA across the four quartiles, for primary and post-primary school between 2006-2013. Figure 2.27 shows that during this time period, in primary schools the rate of CWA in Quartile 1 increased by 3% points, from 24% to 27%. There was little change in the proportion of COA within Quartile 1, if anything there was a very small downward trend.

Figure 2.28 shows a similar pattern within post-primary schools. In 2006, 21% of the CWA at post-primary school fell within the most deprived quartile band, and by 2013 this proportion had increased by 3% points, to 24%. This contrasts to the slightly downward trend that can be seen for COA over the same period in Quartile 1.

Overall, the NIMDM data showed a very similar pattern to the school meals eligibility data; both indicate that since 2006, the profile of CWA has shifted towards being more deprived and their families having lower income. For the interested

reader, graphs differentiating between children with autism and children with Asperger's Syndrome can be found in the Appendices 2.56 – 2.58.

Figure 2.29 (Appendices 2.34 – 2.37) compares quartile profiles (primary and post-primary combined) since 2006 for

a) CWA in mainstream education;
b) CWA in special education; and
c) COA (who had other SEN) in special education.

Over 35% of children with SEN not on the autism spectrum in special schools fell within Quartile 1 (most deprived) over the period between 2006 and 2013. This proportion was much higher than that of CWA in special school (25.6 -29.6%) and CWA in mainstream education (22.9-25.3%). Specifically, more than 40% of children with Asperger's Syndrome who attended special school lived within the most deprived areas.

Figure 2.27: Mainstream primary school children by NIMDM quartile band

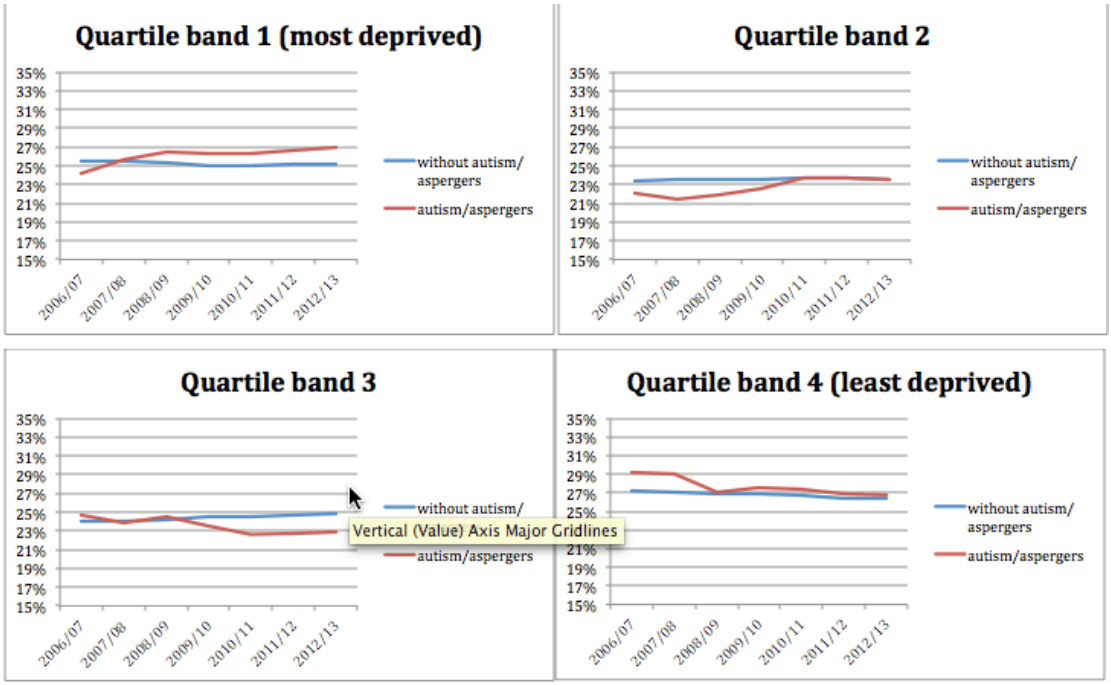


Figure 2.28: Mainstream post-primary school children by NIMDM quartile band

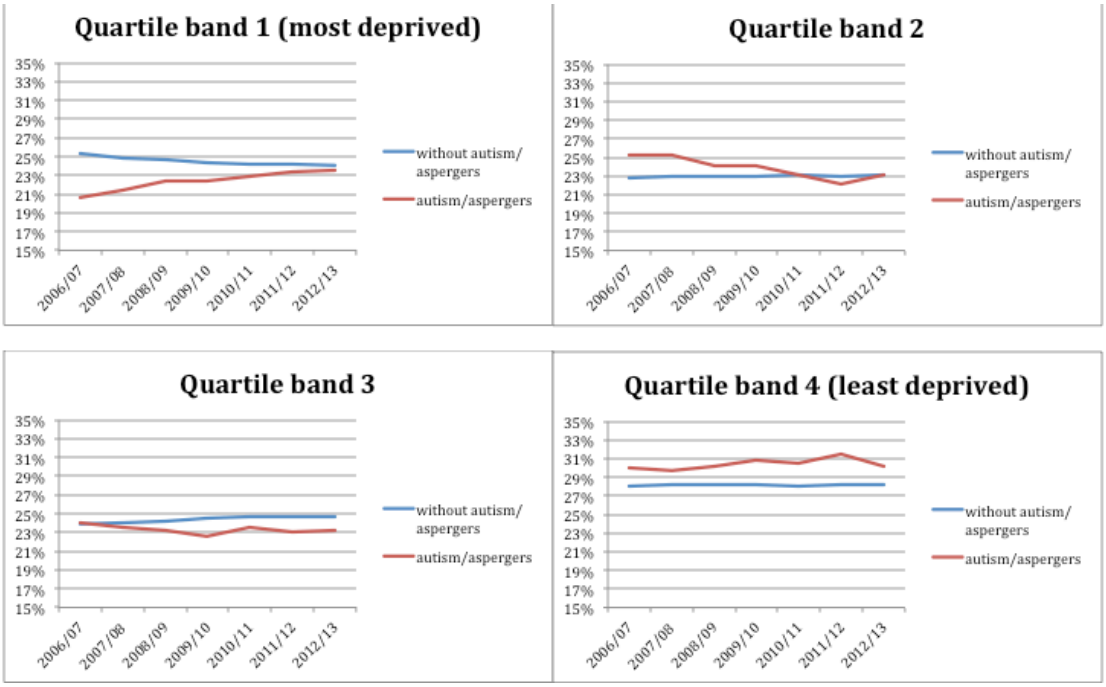
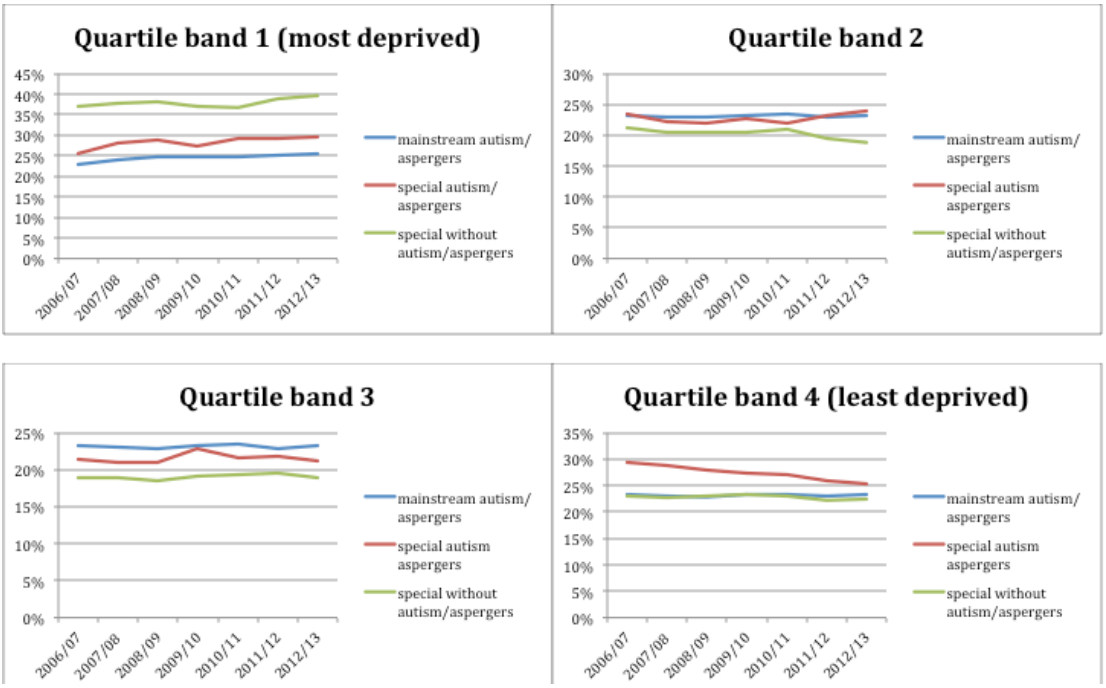


Figure 2.29: Special school children by NIMDM quartile band



4.3) Young persons' with ASD - their behaviour and attitudes

Prevalence of autism amongst secondary/grammar school children aged 11 to 16 years

According to the pupil self-reports in the Young Persons' Behaviour and Attitudes Survey (YPBAS) 2010, the prevalence rate of ASD in mainstream post-primary schools was 0.53% (Appendix 3.5); this equated to 1 in every 189 children aged 11 to 16 years. Note this figure differs marginally from that published by CSU (2010b), partly due to the different weighting variable used by CSU (2010b). In addition, it should be noted that the question used to identify children with ASD in the YPBAS (see Appendix 3.1) did not specifically mention Asperger's Syndrome. It is possible that some pupils with Asperger's Syndrome may not have self-identified with autism because they felt that the term 'autism' did not apply to them.

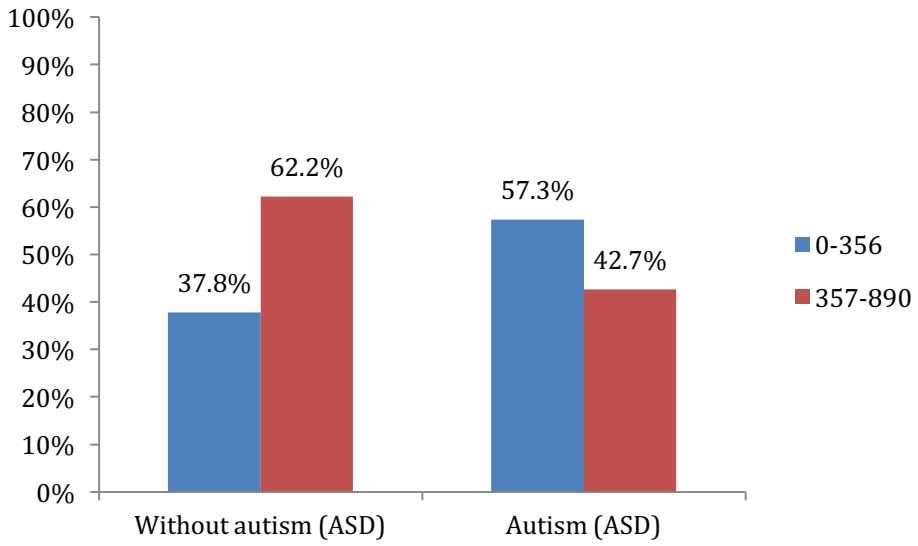
Northern Ireland Multiple Deprivation Measure

On the basis of pupil postcode, participants in YPBAS 2010 were allocated to one of five Northern Ireland Multiple Deprivation Measure (NIMDM) bands: 0-178 (most deprived), 179-356, 357-534, 535-712, or 713-890 (least deprived).

As outlined in Section 3.2, the NIMDM provides a composite measure of 7 types of deprivation; namely, income; employment; health and disability; education skills and training; proximity to services, living environment; crime and disorder. Provisional analysis revealed that for a number of NIMDM bands there were less than five individuals with autism. Therefore in the interests of disclosure control several bands were merged to form two bands 0-356 (deprived) and 357-890 (less deprived). Only those bands that showed similar trends were merged together. For example, compared to students without autism, a greater proportion of students with autism were in both the 0-178 and 179-356 NIMDM bands, and therefore these bands were combined into a 0-356 NIMDM band.

The statistical analysis showed that a significantly greater proportion of CWA (57%, see Figure 3.1 and Appendix 3.6) resided in the two most deprived quintile bands (i.e. 0-178 and 179 – 356) relative to COA (38%).

Figure 3.1: Proportion of students from NIMDM bands 0-356 and 357-890



Employment status of mother and father

All participants of the YPBAS 2010 were asked about the employment status of both their mother and father (Appendix 3.2 and 3.3). Very few CWA replied 'don't know'; that their parent was 'retired'; or that they did not have a mother or a father. Therefore, the analysis focussed on participants whose mother/father was working or was not currently working (Figures 3.2-3.3, Appendices 3.7 and 3.8). There were no statistically significant differences between mainstream post-primary CWA and COA in terms of the employment status of father or mother, although for both groups of pupils the employment rate of mothers was lower than that of fathers.

Figure 3.2: Employment status of father

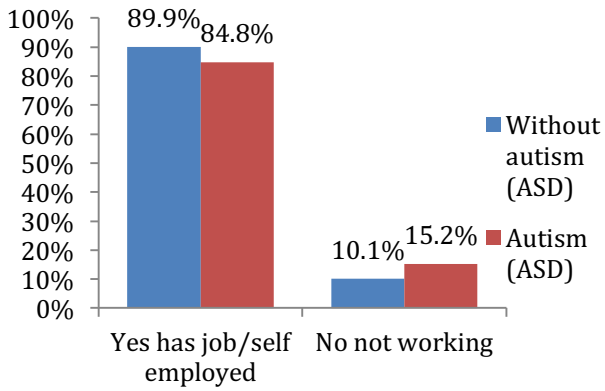
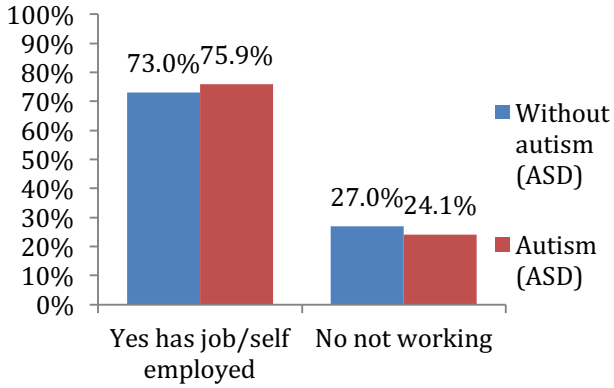


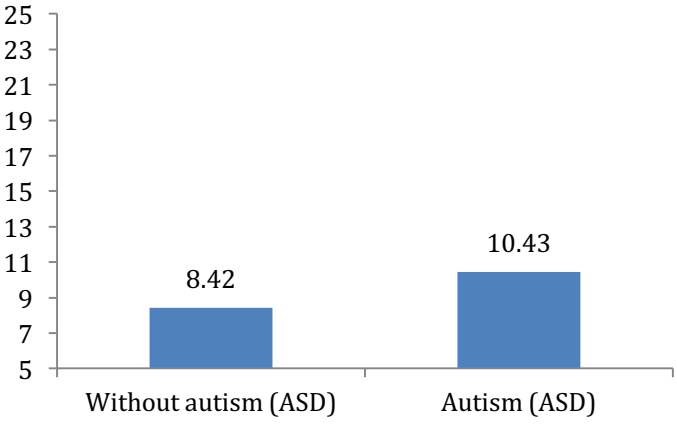
Figure 3.3: Employment status of mother



Social relationships

The YPBAS 2010 questionnaire included 14 questions related to feelings about schoolwork and friendships etc. A factor analysis revealed that 5 of these questions related to social relationships (Appendix 3.4); these questions were combined for a measure of feelings about social relationships. A statistical measure (Cronbach's alpha) showed that the reliability of this scale was good (Appendix 3.9), showing that essentially the five questions reliably measured the same variable. Figure 3.4 (Appendix 3.9) shows the combined score of 'feeling negative about social relationships' on a scale from 5 to 25, with higher scores indicating more negative feelings about social relationships. CWA felt significantly worse about their social relationships than COA (i.e., had significantly higher scores).

Figure 3.4: Combined scores of negative feeling about social relationships



4.4) School leavers

Results

Figure 4.1 (Appendix 4.1) shows the destinations of CWA and COA who left mainstream education between 2008 and 2012. CWA (3-4%) did not appear to be at greater risk of leaving school to face unemployment than COA (3%). Higher education was infrequently the post-school destination of children with autism (9%) or Asperger's Syndrome (22%), while more than four in ten COA went onto higher education (42%). The opposite pattern was true for training and further education. The vast majority of children with autism (81%) and children with Asperger's Syndrome (69%) went to further education or training after leaving school. By contrast less than half of COA (45%) left school to go to further education/training.

Figure 4.1: Destinations of pupils leaving grant aided mainstream post-primary schools.

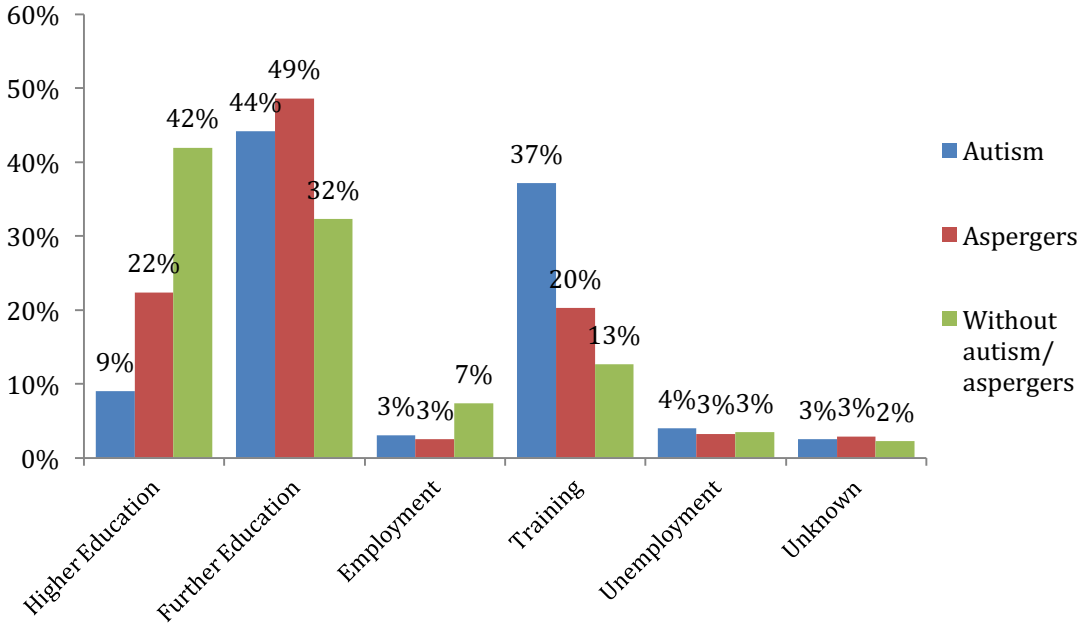
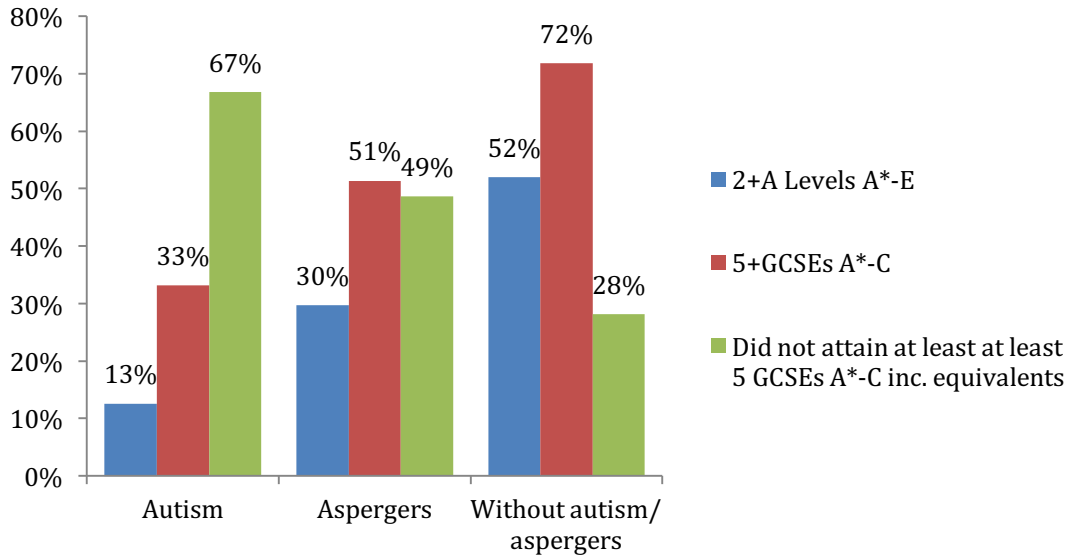


Figure 4.2 (Appendix 4.2) shows that between 2008 and 2012 a large proportion of mainstream school children with autism (67%) or with Asperger's Syndrome (49%) left school without at least 5 GCSEs (A*-C or equivalent). This compares to fewer than 1/3 of COA who did not achieve 5 GCSEs (28%).

Figure 4.2: Qualifications of pupils leaving grant aided mainstream post-primary schools



4.5) Further Education

Results

Key findings:

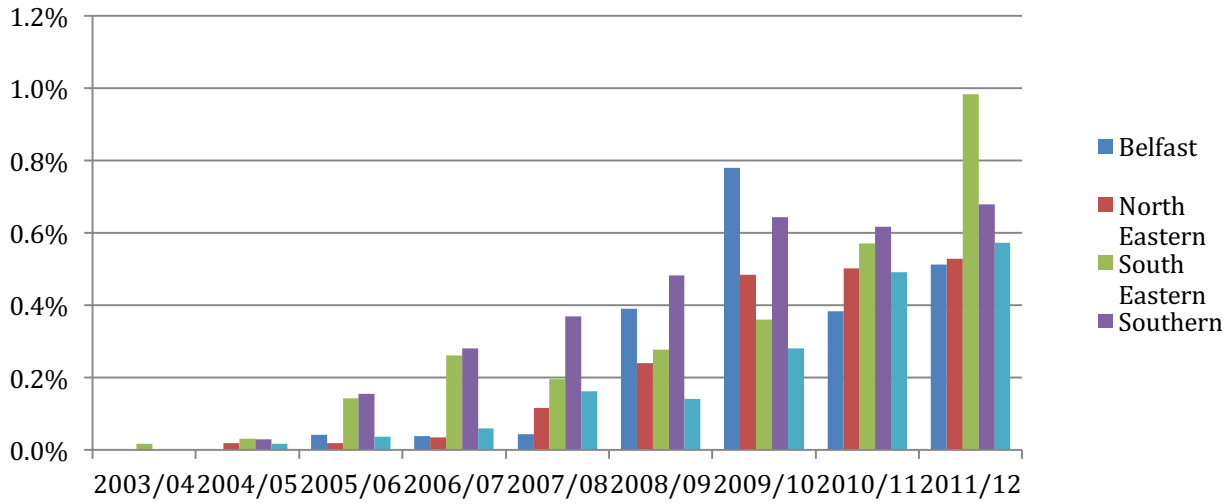
- Overall, FE enrolments of SWA for professional and technical subjects increased from 0.0% (2003/04) to 0.7% (2011/12). There was an upward trend in all ELBs.
- Northern Ireland's FE enrolments of SWA exceeded enrolments in England by 0.16 to 0.27 percentage points.
- SWA were more likely than SOA to enrol in Level 1and entry-level courses (14 percentage point difference).

Although there were some differences between Education and Library Boards (Figure 5.1; Appendices 5.1 – 5.3), the overall proportion of enrolments of SWA in Northern Irish FE colleges increased from 0.01% (2003/04) to 0.7% (2011/12).

The highest enrolment of SWA (1%) was recorded in the SEELB in 2011/12. The regional FE college (South Eastern Regional College; SERC) reported the following changes had been implemented which may explain increasing enrolment rates in SEELB:

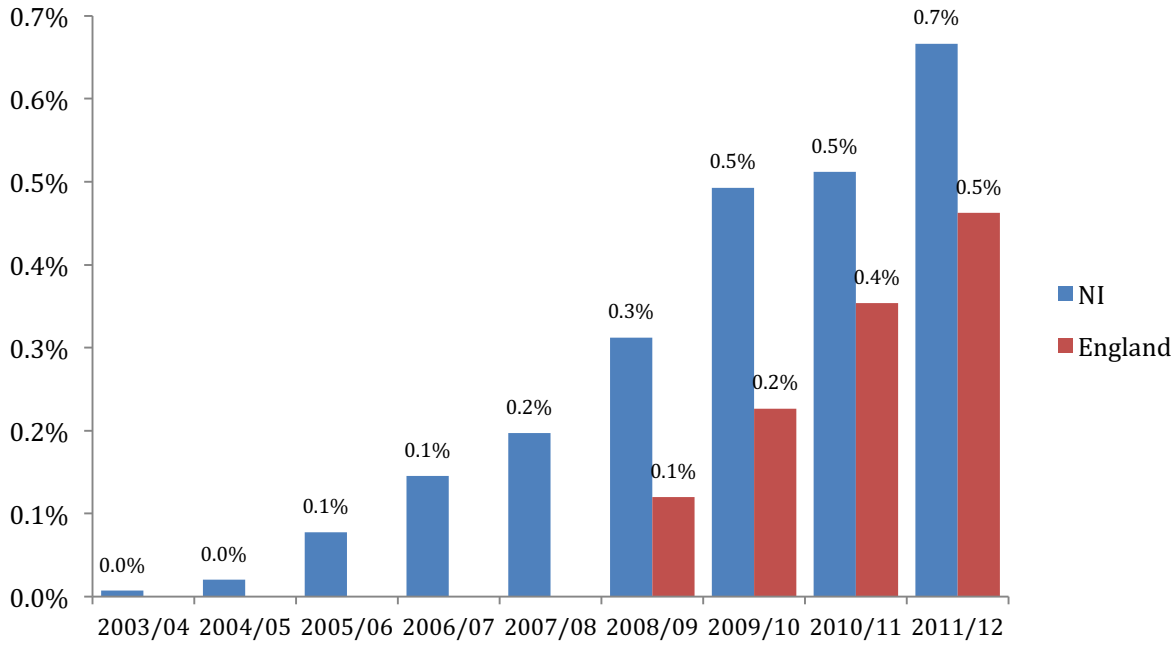
- A wider definition of disability was adopted. In addition to autism, Asperger's Syndrome was included on the disclosure form.
- There was reduction of course topics with more emphasis on skills development for the workplace due to improved communication with employers and a clear employment focus in the courses.

Figure 5.1: FE enrolments of students with ASD by Education and Library Board



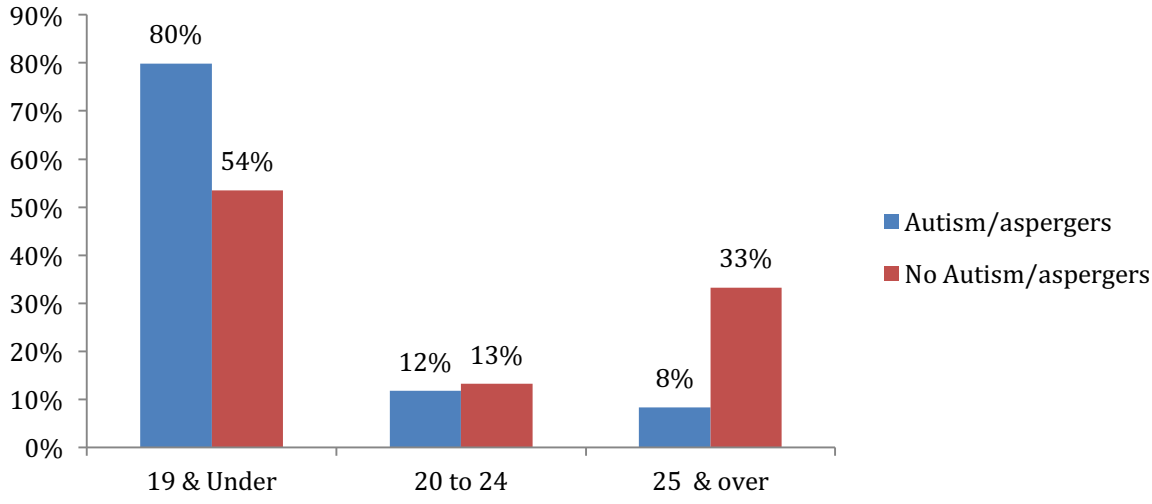
In England, the prevalence rate for FE enrolments of SWA rose from 0.12% (Figure 5.2), when it was first recorded in 2008/09, to 0.46% in 2011/12 (Data Service, 2014). English enrolment figures were consistently lower than NI enrolment figures (difference of 0.16 to 0.27 percentage points).

Figure 5.2: FE enrolments of students with ASD in NI and England



FE students with ASD were younger than other students (Figure 5.3, based on 2011/12 data), i.e., most of SWA were <19 years old (80%), while SOA were generally older, with only just over half of them in their teens (54%). Very few SWA were mature students, i.e., only 8% were >25 years of age, in contrast to 33% of the other students and this age distribution did not change over time (Appendices 5.4-5.6).

Figure 5.3: FE enrolments of students with ASD by age



Note. '25 & over' includes enrolments where age was unknown (>1%).

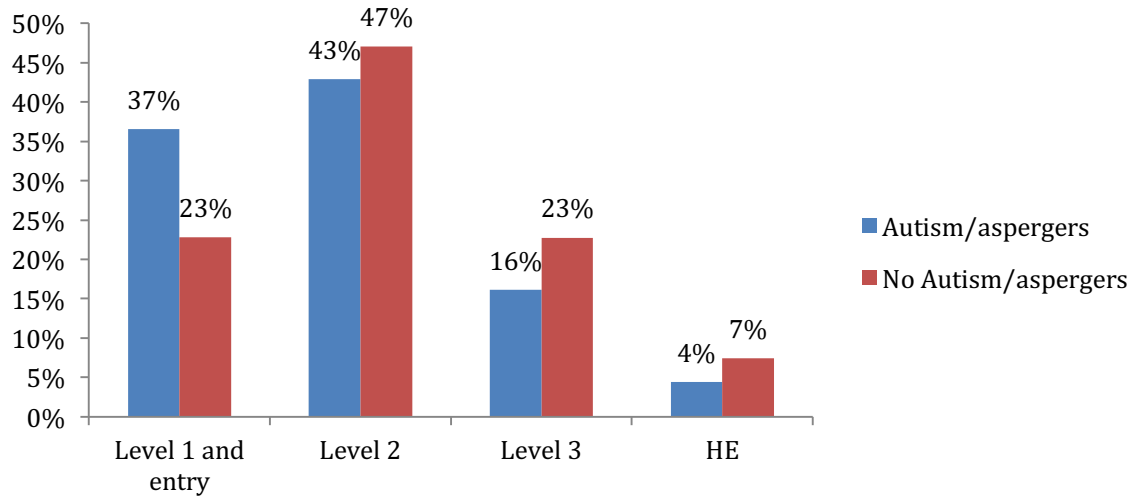
With regard to gender, enrolment figures were in line with the overall ratio of ASD in males to females (4:1; Elsabbagh et al., 2012), i.e., from 2009/10 to 2011/12 just over ¾ of SWA in FE Colleges were male (Appendix 5.16; 76%) and just about ¼ were female (24%). The gender distribution for SOA was reflective of the overall FE student population (50% male and 50% female based on 2011/12 statistical bulletin; DEL, 2012b).

In terms of level of study, FE colleges offer different levels.

- Entry Level: below GCSE level.
- Level 1: GCSE grades D-G.
- Level 2: GCSE grades A*-C,
- Level 3: A level.
- Higher Education Level: Undergraduate degree level

In 2011/12, SWA were enrolled at all study levels, although more SWA (37%) were enrolled in Entry Level/Level 1 than SOA (23%). Fewer SWA (16%) studied at Level 3 than SOA (23%). These figures were relatively stable across time (Appendices 5.7-5.9).

Figure 5.4: FE enrolments of students with ASD according to level of study in 2011/12.

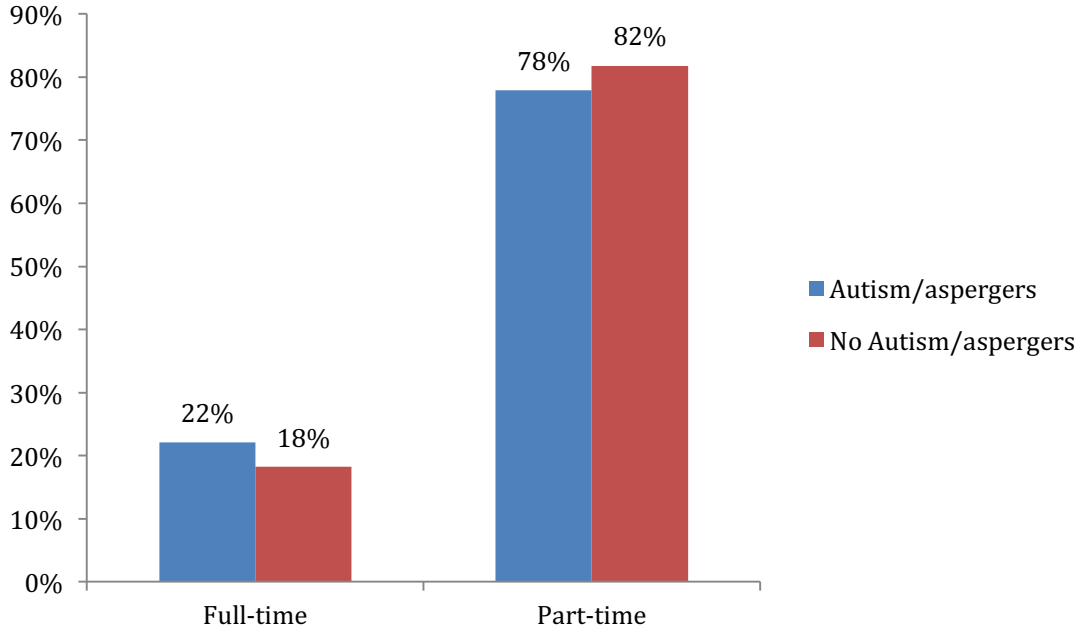


Note. HE = Higher Education and is equivalent to National Qualifications Framework Level 4 and above

FE colleges offer full-time as well as part-time courses, although the vast majority of overall enrolments are part-time. The attendance mode was similarly distributed for

SWA and SOA with a relatively small preference for full-time courses for SWA (Figure 5.5) and the rates were relatively stable across time (Appendices 5.10 -5.12).

Figure 5.5: FE enrolments of students with ASD according to mode of attendance in 2011/12



Further Education colleges offer a wide range courses in a wide range of subjects of study. Available data allowed for the differential analysis for ASD diagnosis according to subject of study, however due to small cell counts, it was not possible to drill down these data by gender.

Figure 5.6 (Appendix 5.13) shows enrolments by subject categories; the categories were developed by the Qualifications and Curriculum Authority (QCA), the Council for the Curriculum, Examinations and Assessment (CCEA), the ACCAC (Welsh authority), as well as other educational organisations (see QCA (July, 2004) for a list of all organisations involved). To avoid small numbers, data from 2009/10 and 2011/12 were combined.

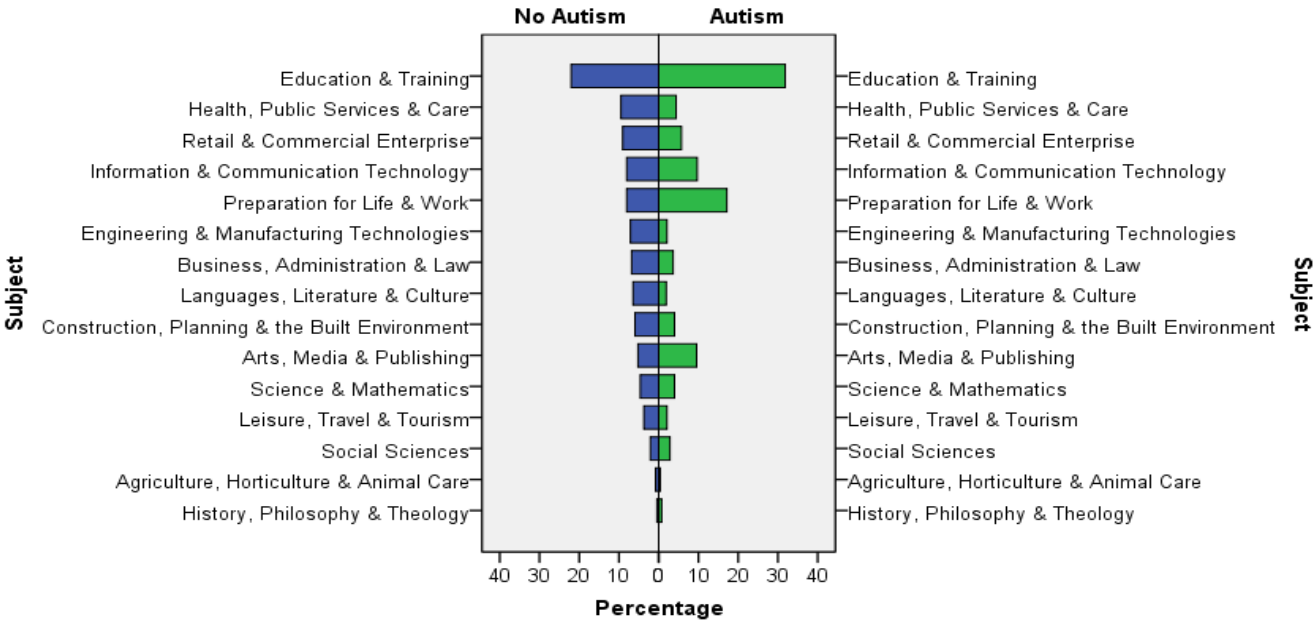
The most popular courses focussed on *Education and Training* with high enrolment figures for SWA (32%) and SOA (22%). Courses focussing on *Preparation for Life and Work* were taken more than twice as often by SWA (17%) than by SOA (8%). Equally, *Arts, Media and Publishing* courses had enrolments of twice the ratio of

SWA (10%) than SOA (5%) and the same was true for *History, Philosophy and Theology* courses, i.e., SWA (0.8%) and SOA (0.4%).

Engineering and Manufacturing Technologies had fewer enrolments of SWA (2%) in comparison to SOA (7%), as did *Leisure, Travel and Tourism* (SWA 2% compared to SOA 4%) and *Agriculture, Horticulture and Animal Care* (SWA 0.4% compared to SOA 0.8%).

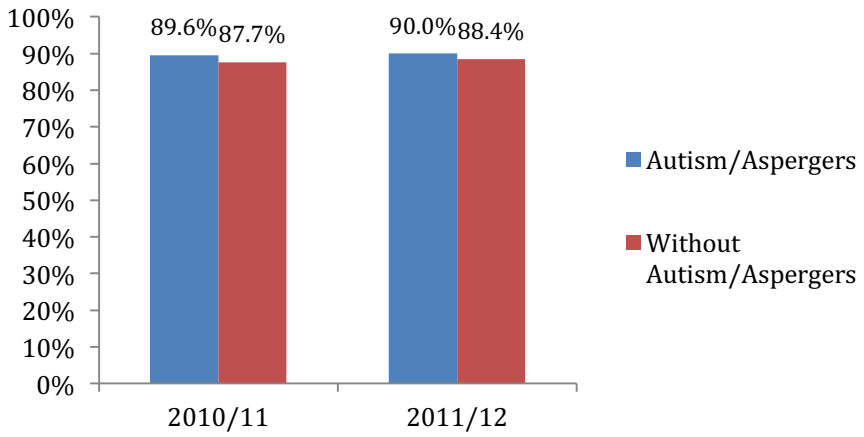
Subjects that were traditionally female dominated had not as many SWA enrolments, e.g., *Health, Public Services and Care* attracted SWA (4%) compared to SOA (10%); *Languages, Literature and Culture* was chosen by 2% of SWA and 6% of SOA; while *Business, Administration and Law* had 4% of SWA and 7% of SOA enrolment.

Figure 5.6: FE enrolments of students with ASD according to study subject



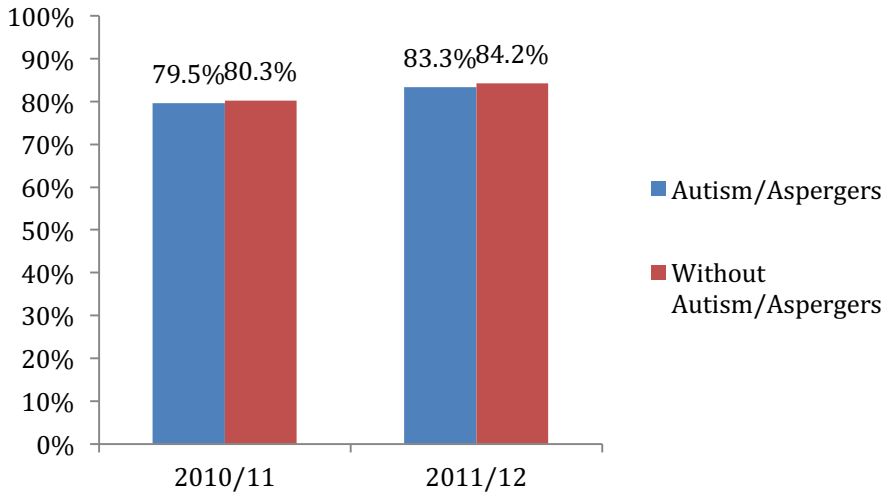
Final year retention rates provided a good measure of success for FE colleges. DEL provided retention rates data for the present analysis. In both 2010/11 and 2011/12, retention rates for SWA were slightly higher than retention rates for SOA (1.5-1.9 percentage points; Figure 5.7; Appendix 5.14).

Figure 5.7: Final year retention rates for SWA and SOA in Further Education colleges



Achievement rates were calculated as the proportion of students who completed final year and met the course targets (e.g., GCSEs), either fully or partially. Achievement rates were very similar for SWA and SOA, separated by only one percentage point (Figure 5.8; Appendix 5.15).

Figure 5.8: Final year achievement rates for SWA and SOA in Further Education colleges



4.6) Higher Education

Key findings:

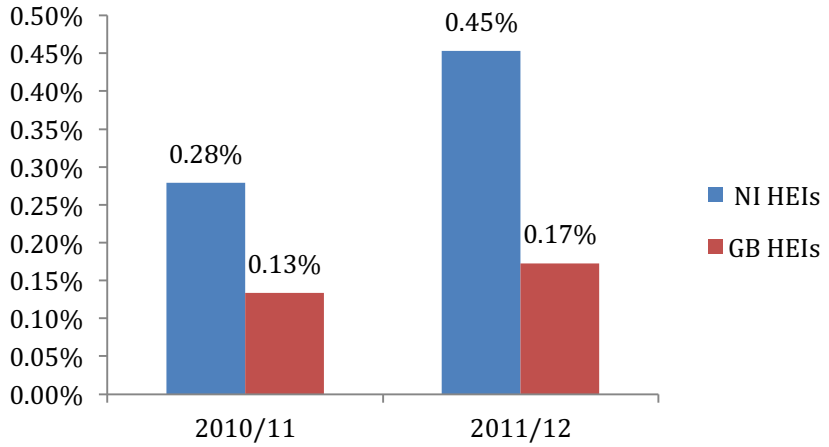
- The proportion of enrolments by students with ASD (SWA) in HEI in Northern Ireland increased from 0.28% (2010/11) to 0.45 (2011/12).
- NI enrolments of SWA exceeded GB enrolments by 0.15 to 0.28 percentage points.
- SWA from NI were more likely than students not on the autism spectrum (SOA) to choose Northern Irish HEI rather than study elsewhere.
- SWA differed from SOA in terms of the subjects studied, although in some cases these differences may have been related to gender.

Higher education enrolments

Of the 52,000 enrolments at Northern Irish HEIs in 2010/11, 145 students stated that they had Autism Spectrum Disorder (0.28%); in contrast, only 0.13% of students enrolling at HEIs in GB reported having Autism Spectrum Disorder (Appendix 6.1).

In 2011/12, of the 51,905 enrolments in NI, 235 (0.45%) were SWA, while in GB 0.17% of all students were SWA (Figure 6.1; Appendix 6.1), i.e., the proportion of enrolments of SWA rose in NI by 0.17 percentage points and in GB by 0.04 percentage points.

Figure 6.1: Percentage of SWA within HEI enrolments in NI and GB.



Country of origin

Figure 6.2 (Appendix 6.2) shows that approximately 9/10 of SWA (89-90%) studying at HEIs in Northern Ireland were from Northern Ireland. The other 10-11% were from GB, ROI, other EU, and overseas. The proportion of SOA (83-85%) who studied at NI HEIs and were from NI was 5-6 percentage points lower.

Figure 6.2: Country of origin of SWA and SOA enrolments at HEIs in NI

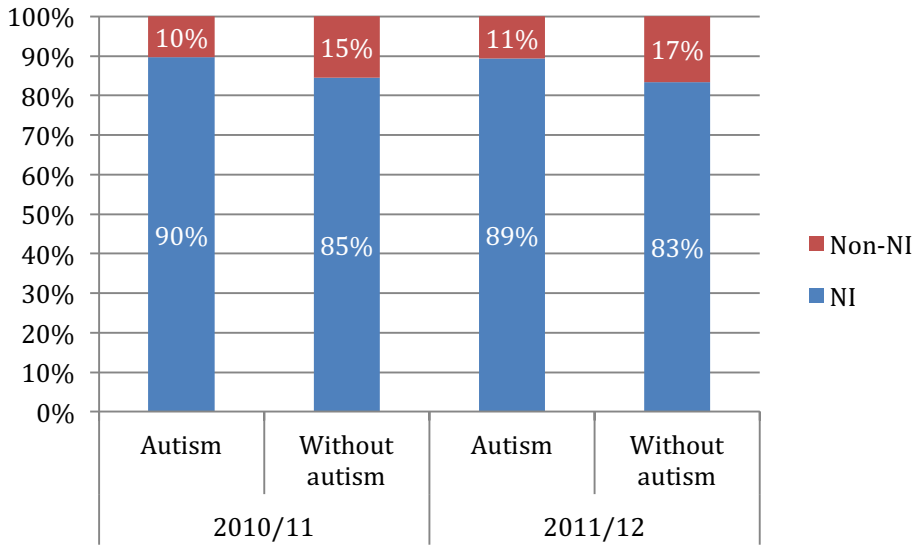
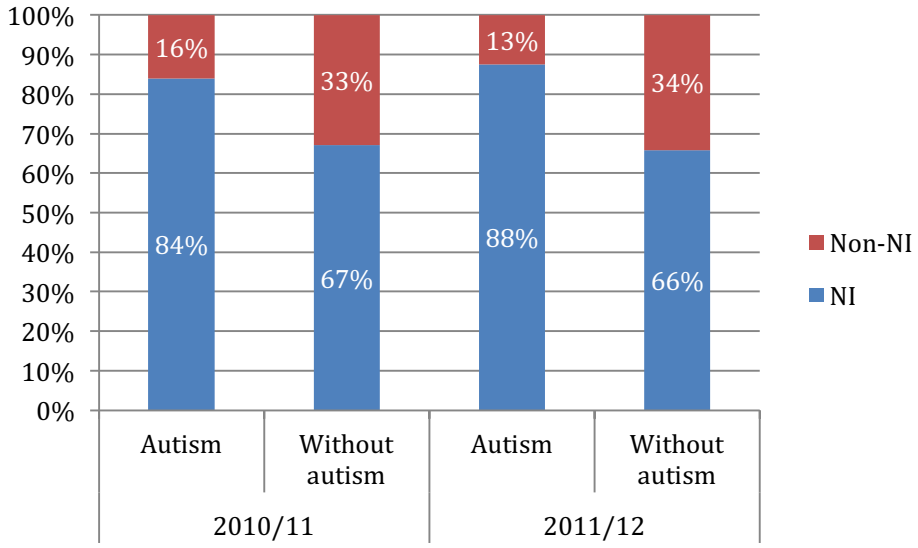


Figure 6.3 (Appendix 6.3) shows that SWA from NI (16% and 13% in 2010/11 and 2011/12, respectively) were less likely to study at HEI outside of NI, than SOA from NI (33% and 34% in 2010/11 and 2011/12, respectively).

Figure 6.3: Country of HEI selected by SWA and SOA from NI



Enrolments by subject

Students with ASD studied the full range of subjects offered at HEIs in Northern Ireland. Subjects with <1% SWA or SOA enrolments were excluded from the analysis (NB; sensitivity analysis showed that using small numbers that have been rounded would result in an unacceptable margin of error). In addition, to mitigate the effects of rounding, very small differences were not included. Consequently, the following analysis excluded *Agriculture, Building and Planning*; *Mathematical Sciences; Combined;* and *Veterinary science*.

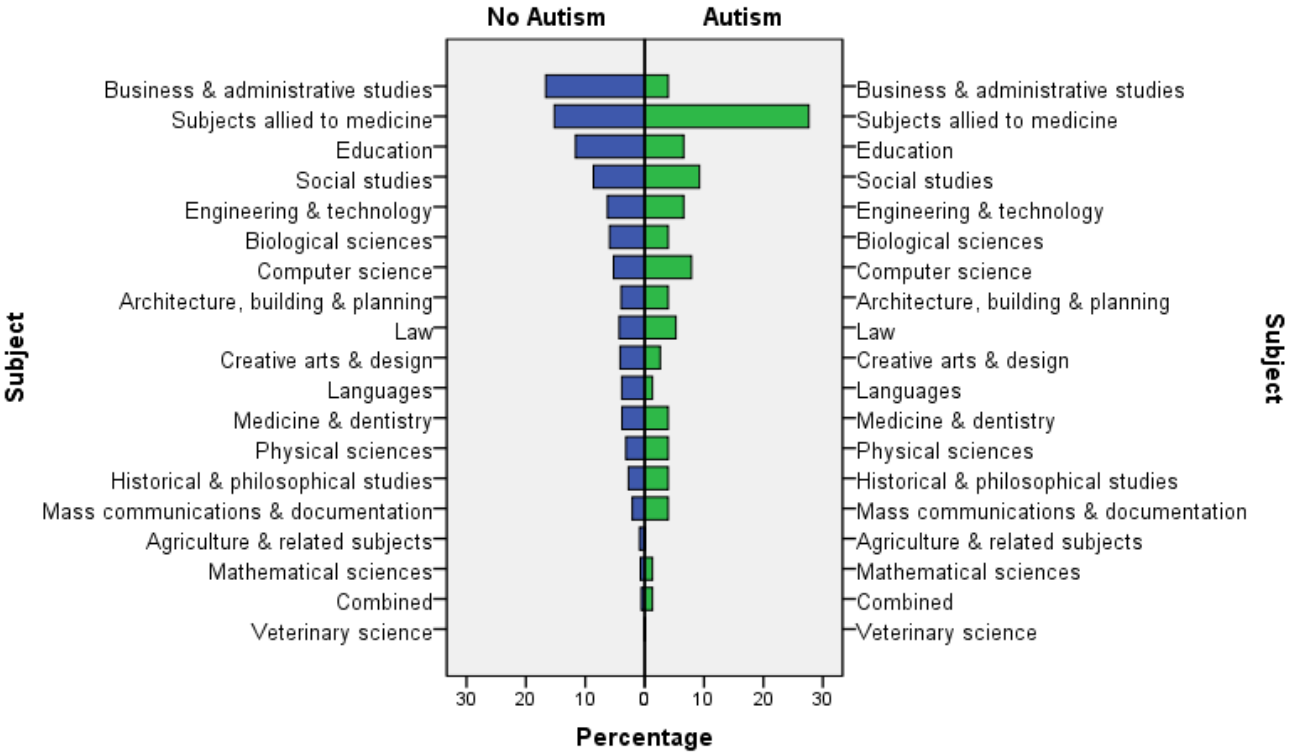
With regard to gender distribution in 2011/12, only just over half of SWA were male (53%), while 47% of SWA were female. For SOA, the male: female ratio was 42% and 58% (see DEL, February 2013 for details). (NB: Very small cell counts made an analysis of gender distribution by subject area impractical).

Figure 6.4 (Appendix 6.4) shows that *Business and Administrative Studies* was a popular subject choice for SOA (17%); this rate was more than four times the enrolment rate for SWA (4%).

Education also tended to be less popular amongst SWA (7%) compared to SOA (12%), as was languages (1% SWA vs 4% SOA).

SWA were more likely to study *Subjects Allied to Medicines* (28% SWA vs 15% SOA). The enrolment rate in *Mass Communications & Documentation* for SWA was nearly double that of SOA.

Figure 6.4: HEI enrolments by subject area for SWA and SOA in NI



NOTE re data quality concerns: The numbers of SWA who were enrolled in *Subjects allied to medicine* courses (mainly nursing) was unexpected. We made extensive efforts to verify these figures:

1) First, we contacted DEL to double-check these figures and asked them to provide a breakdown of *Subjects allied to medicine* enrolments of SWA. This revealed that SWA had enrolled onto courses such as *nursing; midwifery; adult nursing; mental health nursing,* and *learning disability nursing*.

2) The DEL statistics bulletin (DEL, February 2013) for total regional HEI enrolments in 2011/12 showed that 51% of all HEI students were enrolled at University of Ulster (UU), 44% at Queen's University Belfast (QUB); 3% at Stranmillis University College; and 2% at St Mary's University College.

We asked disability services at UU and QUB for their opinion on the enrolment figures of SWA for *subjects allied to medicine* courses. QUB told us that they were

not aware of any initiatives designed to attract SWA into nursing, and that they had very few nursing SWA. Similarly UU told us that they were not aware of any initiatives designed to attract SWA to a particular course.

3) We spoke directly to the nursing departments at UU and QUB. Nursing department at UU told us they were not aware of any current SWA, although they also emphasised that they did not hold the level of detail on students with disability that UU disability services had. QUB nursing confirmed what QUB disability services had told us; specifically, that they were not aware of significant numbers of nursing SWA.

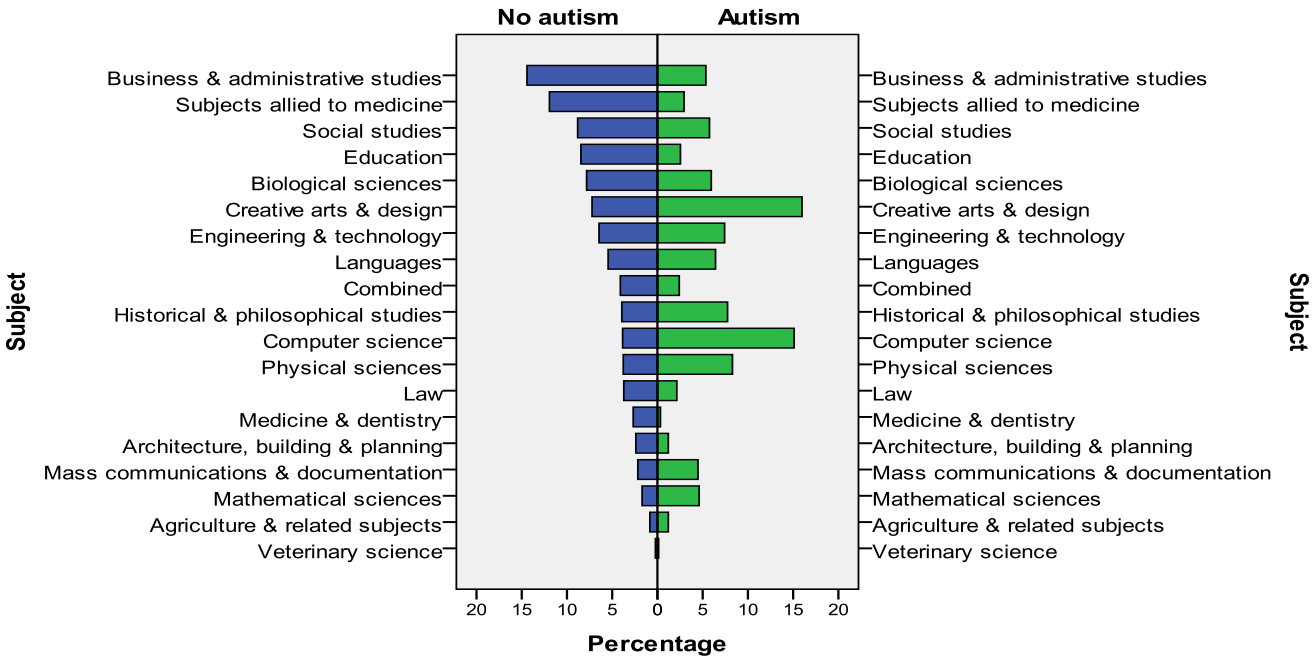
For these reasons, and because the NI data did not show the same trend as the GB data in Figure 6.5, caution must be taken when interpreting the NI subject area data.

The HEI data from Great Britain (GB) were analysed in the same way as the NI data, to reveal differences in enrolment patterns for SWA. As a result of the larger numbers of enrolments, the margin of error caused by rounded numbers was much smaller than for the NI data. Consistent with the NI approach to exclude subjects with very small cell counts*, Veterinary* was excluded from the GB data analysis.

In contrast with Northern Ireland, GB data showed a relatively large difference in the rates of enrolment for *Computer Science* (SWA 15% vs SOA 4%), *Creative Arts and Design* (SWA 16% vs SOA 7%), and *Historical & philosophical studies* (SWA 8% vs SOA 4%). *Mathematics* accounted for a relatively small share of enrolments amongst SOA (2%) and was less than half the rate for SWA (5%). Similar to NI enrolment rates, *Mass Communications & Documentation* was twice as popular for SWA as for SOA (4% vs 2%).

There was also a greater difference in enrolment rates for *Medicine and Dentistry* (SWA 0.3% vs SOA 3%). Interestingly, the enrolment rates in GB for *Subjects Allied to Medicine* showed the opposite trend to that of NI (SWA 3% vs SOA 12%). There was also a tendency for greater enrolment of SOA in subjects such as *Education; Business & Administrative Studies; Architecture, Building, & Planning; Law;* and *Combined*.

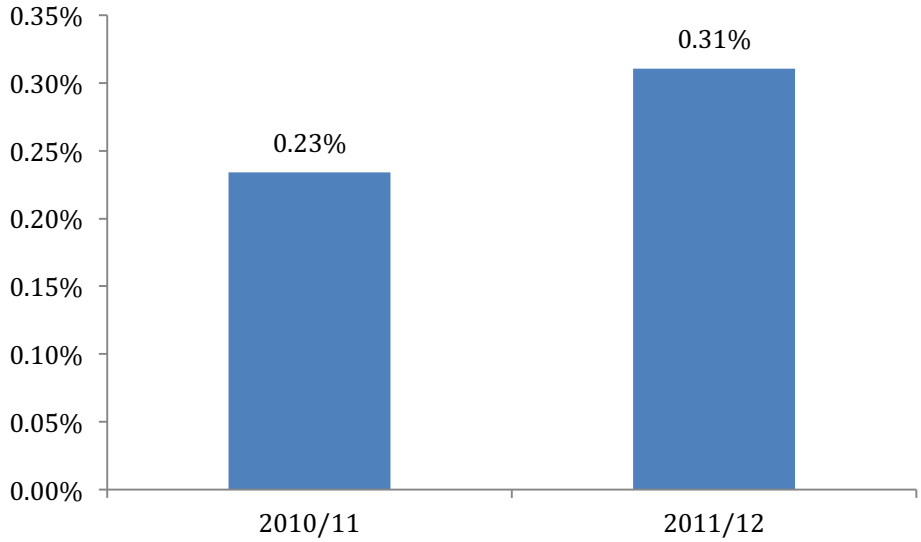
Figure 6.5: HEI enrolments by subject area for SWA and SOA in GB



Completions and Qualifications

Figure 6.6 (Appendix 6.6) shows NI HEI students who successfully completed Higher Education and qualified in 2010/11 and 2011/12, as well as the proportion of these students with ASD, although unfortunately, the rate of SWA was unknown when these students initially enrolled at HEI some 3-4 years earlier. Over the two years that data were available (2010/11 and 2011/12), there was an increase of SWA who completed their studies and qualified with University awards (0.23% and 0.31%). This increase mirrored the increase in new enrolments over these two years (0.28% and 0.45%) and therefore in all likelihood indicate relatively good completion rates (see Figure 6.1).

Figure 6.6: Percentage of NI HEI qualifiers with ASD



4.7) Employment

Work Connect

Work Connect (2012), a voluntary programme, was launched in September 2012 to provide support to Incapacity Benefit/Employment and Support Allowance (IB/ESA) clients with disabilities and/or health conditions to progress into permanent paid employment. Work Connect offered pre-employment and in-employment support specifically tailored to the individual's needs as well as specific help with 'confidence building, job searching, motivation, work experience and short training personal development needs' (DEL 2012). The programme was delivered by Supported Employment Solutions (SES), a consortium of seven specialist disability organisations that included Action Mental Health (AMH), The Cedar Foundation (Cedar), Mencap, NOW, The Orchardville Society, Royal National Institute for the Blind [RNIB] (NI), and Action on Hearing Loss (ibid.).

The available data from DES showed that since its inception in 2012, Work Connect had served 14 adults with autism (AWA), including

- 5 AWA who were no longer in the programme; 2 of these had found work and sustained this for 26 weeks, one in Retail Sales and the other in a local city council; two had left for personal reasons; and one had gone to a European Social Fund (ESF) project.
- 9 AWA were in the programme since April 2013; 8 of these were in the pre-employment or extended pre-employment support stage for 26 or 39 weeks; one client has started work in IT.

Workable (NI)

The Workable (NI) was launched in October 2006 and replaced the Employment Support Programme. Workable (NI) was aimed at jobseekers with more complex disabilities, who can work 16 hours or more per week. The programme was delivered by 3 providers, i.e., Supported Employment Solutions, Disability Action, and Ulster Supported Employment Limited and referrals came from a variety of sources e.g. Employment Service Advisers based in local jobs and benefits offices or job centres, providers directly, jobseekers, and employers.

Workable (NI) offered the following kind of in-work support: job coach**,** mentoring**,** confidence building**,** on and off the job training**,** any innovative support required to enable a client to remain in work**,** access to expert advice**,** development costs can be paid to the employer when required. Each individually tailored support package was developed and agreed with the employment service adviser, employer, employee, and the provider.

Data provided by Workable (NI) in February 2014 showed that 34 AWA were in the programme. They were employed in a range of sectors and skills requirements, including retail and kitchen assistants, administrative assistants, and IT support. They were in receipt of support through Workable (NI) with the aim to achieve unsupported employment in the future.

Previously, 36 AWA had participated in Workable (NI) and 17 of these progressed into unsupported employment, an employment success rate of 47% (see Table 7.1). Data were not available on the employment situation of the other 19 AWA.

Table 7.1 Jobseekers in employment supported by Workable (NI)

	Workable Jobseekers	In unsupported employment	No data for employment
On-going in 2014	34		
Completed 2012- 2013	36	17 (47%)	19 (53%)

Workable (NI) offered the opportunity to develop and make progress through the normal course of learning and carrying out their job and by maintaining and updating skills. There was no time limit for how long a supported employee could remain in Workable (NI) and, due to different levels of support needs, not all employees were expected to progress to unsupported employment.

Employment Support

The Employment Support programme discontinued intake in 2006. In 2013 the Employment Support programme provided the following data: 582 people remained in the Employment Support programme, 3 were AWA, aged >30 years of age, supported by Disability Action, and working in hospitality, retail, and clerical jobs.

Access to Work (NI)

Since 1998, Access to Work (NI) has assisted people with disabilities who were either in paid employment or who were about to commence employment, subject to the necessary supports being put in place.

Access to Work (AfW) provided a range of individually tailored supports, some 'one off', such as communication support for job interviews, others longer term, including contributions to funding for a support worker or commuting costs. Access to Work (NI) provided support to participants when there were additional costs created due to levels of support needs. The six main elements of support available were

- Adaptations to Premises and Equipment;
- Communication Support at Interview;

- Special Aids and Equipment;
- Support Workers;
- Travel to Work; and
- Miscellaneous (for example, support can be provided to assist employers where other additional costs arise because of disability such as provision of disability awareness training (NI Direct, 2014)

These six elements aimed to provide flexible support that enabled people with disabilities to overcome work-related barriers, enabling them to work on a more equal basis with their colleagues, and encouraging employers to recruit and retain employees with a disability. Intake remained steady over a three-year period that was assessed (KPMG, 2009), despite the anticipation that the introduction of the Pathways to Work Programme would direct former Incapacity Benefit/Employment Support allowance claimants onto AtW.

As of July 2013 there were 632 clients registered on the AfW programme, including 12 adults with Autism, 7 of whom lived in the Belfast region and were employed in a range of retail, hospitality, horticulture, craft and administrative roles; and 5 who in the Northern and Southern regions and were employed as assistants in retail, hospitality craft, mechanics and maintenance positions.

4.8) Multiple Exclusion and Homelessness

The prevalence of autism amongst individuals who responded to Phase 3 (interviews) in the Multiple Exclusion and Homelessness assessment was less than 0.5%. Due to small numbers and to ensure protection against disclosure, percentages were rounded for this report.

The prevalence rate of 0.5% was lower than the previously reported English prevalence rate of autism in adults of 1.1% (Brugha et al., 2012). This suggested that individuals with autism were not over represented amongst those facing MEH.

4.9) Northern Ireland Life and Times Survey 2003 and 2012

The Northern Ireland Life and Times (NILT) Survey 2003 included, for the first time, one question regarding autism, namely about attitudes towards a child with autism (CWA) attending the same class in school as the participant's child. Therefore, we also included this question in the NILT Survey 2012 and the comparative analysis is included in the appendix (Appendices 8.1 and 8.2).

Despite small differences in the wording of the 2003 and 2012 questions, it was apparent that the vast majority of people expressed positive attitudes towards CWA in educational settings. In 2003, 71% of people said that they would be 'unconcerned' if a CWA attended the same class at school as their own child (Figures 9.1). In 2012, 92% of respondents said that they would be comfortable if a CWA were in the same class as their child, even if the CWA was not necessarily high functioning (Figure 9.2).

Figure 9.1: Attitudes in 2003 towards CWA in the same class as respondent's child

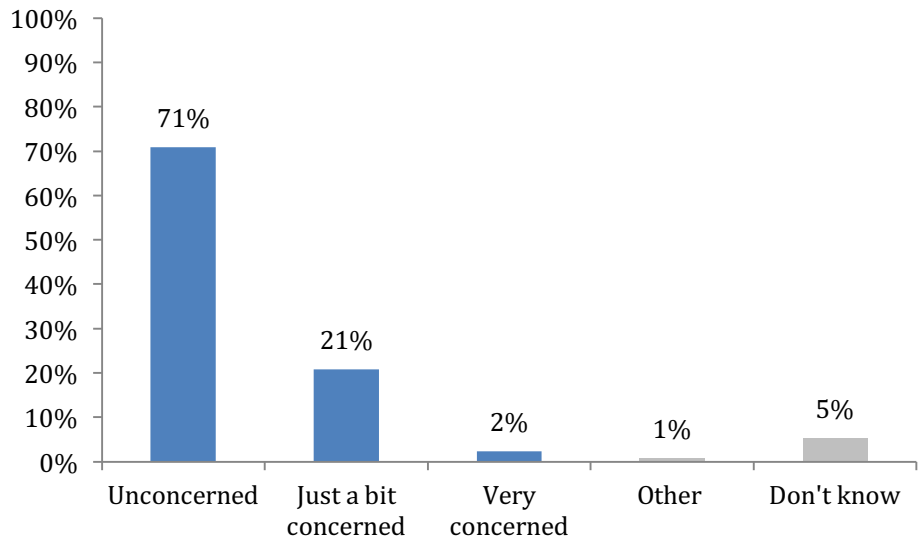
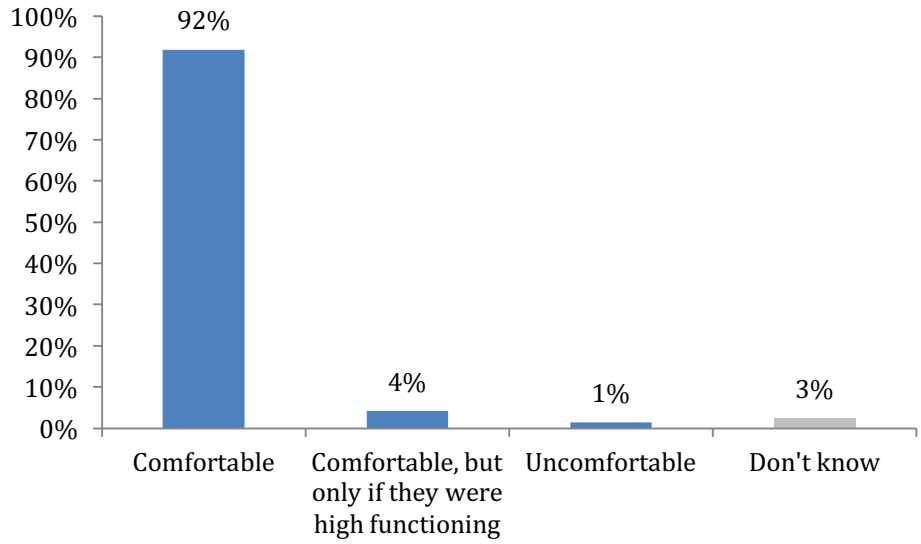


Figure 9.2: Attitudes in 2012 towards CWA in the same class as respondent's child



5) Gap analysis

Table 10.1 shows the data sources that were identified by the secondary data analysis scoping exercise, but that were excluded from the analysis. A description of the data as well as the reason for exclusion is included in the table.

Table 10.1: Data sources excluded from the secondary analysis and reason for exclusion

Data source	**Description**	**Reason for exclusion**
Mortality statistics	Death statistics are available on the NISRA website	ASD was only recorded occasionally on death certificates because there was no formal procedure/requirement to record ASD, i.e., entailed no autism category.
Census 2011 data	A population census is normally undertaken every 10 years, the most recent of which was on March 27th 2011.	Participants were asked do they have a learning difficulty, intellectual difficulty or social or behavioural difficulty, but were not specifically asked if they had ASD, i.e., entailed no autism category.
Labour Force Survey	This survey asked respondents in NI about their personal circumstances and work.	Asked about disability/learning difficulties but not specifically about autism, i.e., entailed no autism category.

Northern Ireland Survey of Activity Limitation (NISALD)	This survey aimed to measure disability and health limitation prevalence in adults and children, and to explore their outcomes and experiences.	Autism could be noted under questions on, e.g., learning disability. While 'autism' could be noted by some respondents, NISALD did not provide a comprehensive measure of ASD.
NI Travel surveys 2008-2010 and 2009-2011	Measured how people in NI used transport to meet their needs, and difficulties that they experienced when using transport. People living in institutions were excluded.	Participants were asked if they had a disability or other long standing health problem that made it difficult to go out on foot; use buses or coaches; use trains; or drive a car. They were also asked if they had a long-standing illness, disability or infirmity. They are not asked specifically about autism, i.e., entailed no autism category.
Northern Ireland Omnibus survey	This survey looked at the lifestyles and views of people in Northern Ireland.	This survey asked "do you have a long-standing illness, disability or infirmity?" and "does this illness or disability limit your activities in any way?". Participants were not asked specifically about autism, i.e., entailed no autism category.
Training for Success (DEL)	This programme provided training for young people aged 16 - 17 (in some cases up to 24). DEL published statistical bulletins on number of starts and leavers, occupancy and qualifications achieved.	Disability is recorded on the administrative system, however, it entailed no autism category.
Steps to Work (DEL)	Steps to Work aimed to help the unemployed/economically inactive to find and sustain employment. DEL publish data on starts, leavers, occupancy and employment outcomes	Disability is recorded on the administrative system, however it entailed no autism category.
Benefits data (DSD)	DSD publish claimant figures for a range of benefits including Employment support allowance, and disability living allowance.	Autism was recorded against some benefits; however, there were a number of issues with the data that made interpretation impossible, e.g., despite the introduction of new codes, many claimants were still recorded

		under old codes, which did not have an autism subcategory.
Hate crime (PSNI)	PSNI publish statistics on the motivating factors behind crimes	Crimes motivated by disability were recorded but no record was made of the type of disability, i.e., no autism specific data available.
Human Resources Consultancy Services (HRCS) data, NI civil service	In the Northern Ireland civil service, HRCS record various demographic details on employees	Disability was recorded; however, it entailed no autism category.

Data gaps

Some of the datasets identified in Table 9.1 would benefit from the inclusion of a robust recording mechanism for autism. In addition, there were a number of areas for which a data source for autism is needed, but presently is not available, i.e., there is no suitable collection mechanism.

1 – Data sets that would benefit from inclusion of ASD category

Census

In order to establish present and future service need, obtaining accurate prevalence data for ASD is a key priority within the Autism Strategy 2013-2020 (DHSSPS, 2014). Several of the data sources in this report provided prevalence figures/estimates for CWA (e.g. Schools Census; Millennium cohort study). However, reliable adult prevalence figures for Northern Ireland were not available.

The present secondary data analysis provided some data on the employment prospects of carers. However, no suitable employment rate source was available for individuals with ASD. At present the best estimate of employment rates amongst individuals with autism comes from a survey conducted in England some 6 years ago (15%; Rosenblatt, 2008).

Prevalence of ASD and employment rates for adults with Autism Spectrum Disorder (AWA) could be measured by making a small adjustment to the census questionnaire. The census already contains a question on employment, so no changes would be needed there. There is already a question on disability and we recommend that *Autism Spectrum Disorder* should be added as a subcategory to the response options for this

question. In case the Census is discontinued this subcategory should be added to the Census replacement.

Recommendation for NI Census: Autism Spectrum Disorder should be added as subcategory to disability questions.

Labour Force Survey

The sample size for the April-June 2013 Labour Force Survey at NI level was 1,492. Taking the Brugha et al. (2012) figure of 1.1% as the most reliable current estimate of ASD prevalence amongst adults, an estimated n=16 of these survey participants would have a diagnosis of ASD. This small number would not be sufficient to compute reliable NI employment rates for individuals with ASD. However, the addition of an autism variable to the LFS would allow the proportion of individuals with ASD within the workforce to be monitored over time. In addition, there may be sufficient sample size at UK level to look at employment rates for individuals with ASD.

Recommendation for Labour Force Survey: Autism Spectrum Disorder should be added as subcategory to the question on long term health problems which already has subcategories such as severe or specific learning difficulties.

Northern Ireland Survey of Activity Limitation (NISALD)

The aim of the NISALD was to give an indication of the prevalence of disability in NI. This survey covered both private households and communal establishments, although only data from private households were available. Autism was recorded in some instances, but not consistently and therefore this was not a reliable source for prevalence of ASD. Subcategories for a range of disabilities were included in NISALD but very low prevalence rates were recorded for some disabilities (<=1%; NISRA, 2007). ASD was not specifically measured. If NISALD were to be commissioned, a question on ASD should be included.

Recommendation for Northern Ireland Survey of Activity Limitation (NISALD): Autism Spectrum Disorder should be added as subcategory to disability questions.

Training for Success/Steps to work

Mainstream training and employment programmes, such as Training for Success and Steps to Work provided general occupancy data for individuals with disabilities in relevant statistical bulletins, but ASD figures were not recorded.

We were able to obtain from DEL current occupancy figures for AWA who were on disability specific employment programmes, such as Workable NI. However, mainstream training and employment programmes, such as Training for Success and Steps to Work did not record this level of detail for disability. Steps to Work and Training for Success statistical bulletins did provide occupancy data for individuals with disabilities, but could not break this down further because ASD was not recorded as a subcategory.

The new employment programme, Steps to Success (DEL), that is to replace Steps to Work would offer the opportunity to collect ASD specific data on the numbers of individuals with autism who use these programmes, and the outcomes for these individuals. It may be the case that these individuals would be better served by disability specific provision, such as that provided by DEL or by autism specific employment provision.

Recommendation for Training for Success/Steps to work and Steps to Success: Autism Spectrum Disorder should be added as subcategory to disability questions.

Further Education/Higher Education

ASD was recorded in both Further Education (FE) and Higher Education (HE) datasets. Given that disclosure of disability is voluntary, figures were based on self-report, however, there was a significant increase of students with ASD over the past few years (see Section 5: Further Education; and Section 6: Higher Education).

The FE data set recorded individuals with more than one disability under 'multiple disability' and data on retention rates and achievement rates in FE institutions were included. However, autism specific data on retention and achievement were not available for HE, primarily because the current recording method for ASD had not been in place for long enough, i.e., SWA were still at college. Once these data become available, qualification statistics can be used to assess HE performance for SWA.

Increasing numbers of SWA in FE and HE indicate that either enrolments and/or disclosure of ASD have been rising over the past few years. Based on data provided by DENI this is likely due to:

1. ASD prevalence rising amongst school children (particularly in mainstream schools), and
2. Proportion of students with ASD, who go onto Further and Higher Education (although the figures only apply to mainstream, see Section 4).

Recommendation for Further Education/Higher Education: Rather than using the category 'Multiple Disability', all disabilities (including Autism Spectrum Disorder) should be recorded separately.

School leavers' survey

School leavers survey did not include data on destination or qualifications for individuals with ASD, who left special schools.

Data would need to be collected on destinations of special school leavers in order to gain a better indication of the proportion who enter into further and higher education. Alternatively, data linking between the Schools Census and Further/Higher Education datasets could provide this information (using unique pupil numbers).

Recommendation for School leavers' survey: To include data on Special School destination/qualifications for individuals with ASD.

Travel survey

The Autism Strategy (DHSSPS, 2014) identified the role of the Department of Rural Development (DRD) as removing barriers for individuals with ASD to accessing and using public transport and to ensure positive experiences by individuals with ASD and their families.

Approximately 6,000 individuals were surveyed about their travel habits between 2010-2012 (DRD, 2013). Based on current ASD prevalence estimates, this would not be a large enough sample to compute precise estimates of travel habits, however, potentially there could be sufficient statistical power to look at group differences (medium/large sized differences). In particular, it would be interesting to compare individuals with ASD to those without ASD in terms of difficulties experienced travelling.

Recommendation for Travel survey: Autism Spectrum Disorder should be added as subcategory to disability questions.

Hate crime

While the literature review and the secondary data analysis uncovered research and data sources in relation to bullying, hate crime has been under researched. Crimes motivated by disability were recorded on the PSNI website, but did not record the type of disability. We recommend that more details should be collected on hate crimes motivated by disability, including ASD).

Recommendation for Hate crime: Autism Spectrum Disorder should be added as subcategory to disability questions.

2 – Areas of interest that would benefit from collection of new ASD data sets

The issue of prevalence

The Health and Social Care (HSC) Board told us that CWA prevalence figures based on HSC Trust data were not expected to be available for many years. Additionally,

they conveyed that AWA prevalence data were not expected to be available for a long time (no exact time was indicated).

One potential option would be to collect ASD prevalence data through General Practitioner (GP) records. GPs record ASD under *Read Codes*, e.g., under Pervasive Developmental Disorders (Eu84) and Asperger's Syndrome (Eu845). While the same *Read Codes* are used throughout Northern Ireland, it is up to the individual GPs to decide which read code most accurately reflects the diagnosis/condition. There is no mechanism in place to ensure that GPs record autism in a standardised or consistent way, and therefore there is likely to be variation in the way ASD is recorded across practices.

Children's and Adult's Care Pathways (HSCB, 2011, 2013) have been developed to ensure consistent referral and diagnostic practices across all Health and Social Care Trusts. The results of diagnostic tests for adults are supposed to be reported back to the GP (HSCB, 2013, p.17), but to date there is no mechanism for reporting a new diagnosis of ASD to the child's GP. Therefore this information has to be provided voluntarily by patients or their caregivers.

We found that presently GP data were not a good indicator of prevalence of ASD in adults or children. Nevertheless, GP data have the potential to be the most promising source of prevalence data becoming available within a reasonable time frame. (NB; even if there would be another Census and ASD were included as separate category data would not be available for at least 10 years.)

Protocols could be put in place quite quickly to make GP data a valid source for ASD prevalence estimates. Not only would this be a useful source for prevalence data, it would allow GPs to identify patients with ASD and signpost or refer to suitable treatment and/or services.

Recommendation for General Practitioner (GP):

1) **Protocols should be put in place to ensure ASD is recorded in a standardised and consistent way.**
2) **Recording should be linked to payments. This would mean that GPs could charge for ASD patients in the same way as they can charge to record other conditions, e.g., asthma.**

3) **GP would also need an appropriate Read Code to record patient/ caregiver, i.e., adult self-reporting of ASD.**
4) **A follow-up system would needs to be put in place to ensure that referrals, e.g., to assessment or treatment are reported back into GP data bases.**
5) **Outcome data should be included in GP data bases**

Recommendations

Minister for DEL, Dr Stephen Farry (All-Party Group on Learning Disability, 19th November 2013), emphasised his commitment to helping people with a learning disability who are not in education, training or employment (NEETs). This commitment was further highlighted in the Autism Strategy (DHSSPS, 2014). The key to honouring this commitment is having the necessary data to evaluate progress. Therefore, we make the following recommendations based on the Gap analysis

***Recommendation 1*: Data on service users with Autism Spectrum Disorder should be included as a separate category in the following surveys, records, and evaluations:**

1. Census
2. Northern Ireland Survey of Activity Limitation (NISALD)
3. Training for Success/Steps to work
4. Steps to Success
5. Travel survey
6. Hate crime
7. Labour Force Survey

***Recommendation 2*: There should be added data collection mechanisms regarding Autism Spectrum Disorder in the following areas:**

1) Rather than using the category 'Multiple Disability', all disabilities (including Autism Spectrum Disorder) should be recorded separately (e.g., in Further Education/Higher Education data sets).
2) Data on school destination/qualifications should include data for Special Schools (e.g., in School leavers' survey).

Recommendation 3: **Existing data collection protocols for General Practitioner (GP) should be extended to include the following:**

1) A standardised and consistent way to record patients with ASD; i.e., appropriate Read Codes to record ASD.
2) Recording should be linked to GP payments.
3) A follow-up system to record referral, assessment, and/or treatment uptake
4) Outcome data recorded on GP data bases

6) Discussion

A secondary data analysis was conducted as part of the overall BASE Project, using a large number of existing data sets with the aim to *enhance understanding of the extent, distribution and causes of inequality and social exclusion in Northern Ireland society and the consequences of policies and actions aimed at their reduction.*

In order to identify available data sets all Government Departments, Education Library Boards, the Health and Social Care Board, and ASD related charities were contacted; 'snowballing' was used to identify potentially hidden data sets. Where possible and appropriate, secondary analysis was conducted with regard to individuals with ASD. This process yielded the large and rich analysis presented in this report. Specific gaps in the data sets were identified and recommendations were made as to addressing these gaps.

The comprehensive search uncovered a substantial number of good quality data sets that had not previously been analysed with regard to ASD, but that actually included an ASD classification (NB; sometimes quite unexpectedly). As such, we were able to cross-tabulate substantial amounts of existing information with a focus on ASD and pull together important previously unidentified information that is highly relevant to a wide range of policies and strategies, especially with regard to social exclusion and poverty.

The findings reported here aim to assist Departments and public bodies to *comply with their statutory duty under Section 75 of the Northern Ireland Act* and the *Autism Act (NI) 2011,* by offering a wealth of baseline data and developing benchmarks

against which future policy implementation can measure the impact they have in helping the individuals with ASD and their families *out of the poverty trap and reducing inequality* (see Product 1, Literature Review, Figure 1.1).

This discussion focuses on a number of key issues, specifically those that foster the promotion of *education, improved economic policy* and *sustainable development*. Data reported in this section offer, for the first time, comprehensive foundation knowledge and thus form a baseline that can contribute to the *development of the programme for Government.* New information emanating from this secondary data analysis regarding prevalence of ASD is also discussed in relation to the way it can be used to inform policy, especially regarding the demand for future services (e.g. special educational needs provision).

Prevalence

In contrast to other prevalence estimates, e.g., such as those based on the Millennium Cohort Study (MCS) where confidence intervals need to be taken into account, the prevalence reported here is based on the Department of Education NI (DENI) School Census data (DHSSPS, 2013), i.e., there is much better certainty that the figures are precise. Nevertheless, the MCS autism prevalence figures that we calculated for the UK were broadly in line with the prevalence data delineated from DENI data, and where differences existed these may reflect regional variations.

Prevalence rates of autism amongst school-aged children have been rising in Northern Ireland over the last 5 years, and averaged 1.8% in 2012/13. Prevalence rates differed across HSC Trusts; e.g., in the Belfast HSC Trust prevalence rose to 2.6%, while in the Southern HSC Trust prevalence remained around 1.2%. These figures provide a good indication of present prevalence amongst children (DENI, 2012). The figures concur with recently reported international prevalence rates for autism in 2% (1/50) of children (CDC, 2013).

At present, there is no reliable source to calculate ASD prevalence for adults in Northern Ireland, making service planning for adults difficult, although of course, the child data allow for forward prediction of future prevalence. Internationally, adult prevalence rates are estimated to be 1.1% (1/88) (CDC, 2012), but these figures are likely to grow as the children grow up.

The parent reported prevalence rate of 3.5% at aged 11 found in the MCS is of great concern. If this high rate is in fact an accurate reflection, in the short term a elevated influx of children with autism is to be expected first in post-primary education, in the medium term this influx will be felt in FE and HEI and ultimately, in the long term, it will be felt in the employment market.

Evidently, intensive early behaviour analysis-based interventions are significantly related to optimal outcomes, significant increases in IQ, and considerable, meaningful reductions in challenging behaviours. They are statistically significantly associated with a reduction of ASD diagnosis (Dawson, 2013; Orinstein et al., 2014). These kinds of interventions are not routinely available by statutory service providers in the Northern Ireland (Dillenburger, 2011) and the rest of the UK (ABA4All, 2014) and therefore it is likely that the positive results achieved in the USA (Autism Speaks, 2014, Fein et al., 2013; Webb, Jones, Kelly, & Dawson, 2014) will not be replicated in the UK in the near future. In fact, Howlin et al. (2014) confirmed this prediction when they evidenced the very poor outcomes in their 40-year follow-up study of adults with autism in the UK, who did not benefit from early intensive behaviour analysis based interventions,

> For the majority of participants (N = 45, 75%), who were testable both as children and adults, IQ remained very stable ... However, 15 individuals [25% of participants] could not be assessed on standard tests as adults ... Almost all these adults … showed severe aggressive or self-injurious behaviours; none had ever developed language above a 3-year level... Although many attended specialist autism schools as children, none had access to the intensive, early behavioural programmes' (p.49 and 56)

Education

Article 24 of the UN Convention for the Rights of Persons with Disabilities (CRPD) stipulates the right for *Education*. This is reflected in the Autism Strategy (DHSSPS, 2014) that aims to '[e]nsure that children and young people with autism receive a high quality education that prepares them for life and work and enables them to fulfil their potential'(Strategic Priority 8, p. 63). In addition, the OFMDFM 10-year strategy for

children and young people in Northern Ireland (2006) emphasises that education is about enjoyment as well as learning and achieving.

Both of these strategies set ambitious targets, although the means of achieving these were not clearly identified. The secondary data analysis of MCS data reported here revealed that the vast majority of parent/caregivers had high educational aspirations for their children, i.e., when their child was aged 7 years most wanted their child to stay on at school beyond the statutory leaving age. This is an important message for teachers and health and social care staff, especially since there is evidence that parents are frequently more knowledgeable about up-to-date developments and more interested in new knowledge than professionals (Dillenburger et al., 2010). Rather than relying on professionals, parents obtain information and peer support from alternative sources, such as the Internet (Keenan et al., 2010).

In addition, both the 2003 and 2012 NILT datasets showed that the general public in NI hold very positive attitudes towards children with autism in educational settings. NILT 2012 (see BASE Project Report Volume 2) showed that there were high levels of *public autism awareness*; i.e., 82% of the general population were aware of autism and generally had a good understanding and knowledge of ASD; in fact, over 50% of the general population knew a person with ASD personally, within their immediate family or close circle of friends (Dillenburger, Jordan, & McKerr, 2013; 2014).

NILT 2012 showed generally very positive attitudes towards children and adults with ASD (BASE Project, Volume 2; Dillenburger, Jordan, & McKerr, 2013; 2014). The secondary data analysis of NILT 2003 confirmed that this was not a recent phenomenon. Therefore, in line with the World Health Organisation's call '*From raising awareness to building capacity'* (WHO, 2013), a significant move is now required from the focus on mere autism awareness raising to raising awareness of established evidence-based interventions for people affected by autism and their families, that is not available feely in the UK (e.g., NSP, 2009).

The confirmation that the general public welcomed inclusive education policies is important and should be harnessed in education and social care through evidence based methods, such as buddy systems, friendship circles, and peer tutoring (e.g., Kamps, Berbetta, Leonard, & Delquadri, 1994).

The Millennium Cohort Study (MCS) provided information on how young children with ASD (CWA) got on in primary school. The secondary data analysis revealed that from as young as 5years of age CWA were less likely to enjoy school and were more likely to be reluctant to go to school than children who were not on the autism spectrum (COA). Since good school attendance obviously influences a child's chances of fulfilling their educational potential these findings were worrisome. In fact, we found that generally speaking, CWA in mainstream education had considerably lower attendance than COA, i.e., 1 in 6 CWA missed out more than 5 weeks of post-primary schooling per year. While some of these absences were reportedly due to illness, Ambitious for Autism (2014) confirmed troublingly high levels of unlawful school exclusions, i.e., 40% and found that over 50% of parents kept their CWA off school because they thought the schools were unable to provide necessary supports.

Secondary data analysis of School Census data revealed that children with Asperger's Syndrome who attend special school were particularly vulnerable, i.e., they missed 8-13 days more than children with Asperger's Syndrome who are in mainstream education. Many of these absences were unauthorised. Again, these data indicated the need for improvement of inclusive evidence-based teaching practices. Clearly, contact alone is not sufficient to motivate these children to attend school and thus benefit from a comprehensive educational experience (Lamb, 2009) and actively inclusive methods, such as peer-tutoring etc., benefit CWA as well as COA (Cushing & Kennedy, 1997). As Carbone (2010) outlined, *'Children on the autism spectrum are not learning disabled, they are teaching challenges. So, the question is not whether they can learn...the question to ask is, "Can I teach them in a way they can understand?"*

With regard to qualifications and destinations, the Schools Census data revealed that CWA in mainstream education were more likely than COA to leave school without 5+ GCSEs A*-C. The destinations profile of CWA was qualitatively different from that of COA; essentially, after leaving school CWA were less likely to enter into Higher Education and more likely to undertake Further Education or other training. However, CWA were no more at risk than COA to leave mainstream schools and become *Not in Education, Employment or Training* (NEET). Available figures did not include special schools and therefore we do not know what happens to CWA, when

they leave special school. Parents' reports indicate that very few services are available for special school leavers with autism and e.g., in England the Department of Education (2009) reported that young people with disabilities are 2.5 times more likely to be NEET than their peers. Data to dis/confirm similar rates in NI were not available.

To-date, very little research addressed issues of students with ASD (SWA) in Further Education (FE) and Higher Education (HE). Using data sets provided by Department of Employment and Learning (DEL) the secondary data analysis reported here showed a clear upward trend in numbers of HE and FE enrolments of SWA in recent years. This may be due to overall increased prevalence of ASD and subsequently, improved public autism awareness, and/or the Widening Participation initiative (DEL, 2010) aimed at enhancing student disability services and thus enabling more students to disclose ASD.

Achievement and completion data were very positive for FE; there was evidence that SWA were just as likely as SOA to complete their course and gain a qualification. Comparative HE achievement data for SWA were not available and when these data become available they will be particularly important for future planning and tailoring employment programmes.

Poverty, Deprivation, and Standard of Living

Article 19 of the UN Convention for the Rights of Persons with Disabilities (CRPD) stipulates the right to *living independently and being included in the community* and Article 28 stipulates the right to an *adequate standard of living and social protection.* These rights are reflected in the Autism Strategy (DHSSPS, 2014), particularly in terms of independent living, income and other measures of deprivation.

The socio-economic status of families with CWA was assessed from a number of data sources. First, the MCS analysis showed that on an equivalised income measure, families of young CWA in the UK were 9% to 18% worse off per week when compared to families of COA. To take account of the extra cost of disability we also looked at a measure of parents who were managing financially. Parents of CWA were more likely to have financial worries and unpaid bills than parents of COA.

These findings were not surprising given that autism has been associated with a significant loss of family income and increased expenditures for some time (Montes & Halterman, 2008). Although the figures we analysed were slightly above those previously reported, i.e., that on average, the family income of these families dropped by 14% and ended up 28% lower than that of families of COA and 21% lower than that of families of children with other health issues, while the health cost for families with CWA is 6x greater than for other families (Cidav, Marcus, & Mandell, 2012).

Mothers of CWA earned 35%-56% less than mothers of COA (NB: depending on other health concerns). Mothers of CWA were 6% less likely to be employed and work 7 hours less per week than mothers of COA. These limitations do not apply to fathers of CWA, but this still meant that families of CWA were 9% less likely to have two incomes (Cidav, Marcus, & Mandell, 2012).

Eligibility data for free school meals offered a good indication of socio-economic status in NI. Initially, in 2006/07 there was little difference between primary and post-primary mainstream children with autism, children with Asperger's Syndrome, and COA. However, by 2012/13, there were notable differences between these three groups with eligibility rates highest amongst children with autism, followed by children with Asperger's Syndrome.

Changes in the eligibility criteria for free school meals over this period mean that it was impossible to be certain that these changes were income related, therefore the Northern Ireland Multiple Deprivation Measure (NIMDM) statistics were used to assess if children with ASD were more or less likely to live in deprived areas and to see if deprivation rates had changed over time.

The NIMDM analysis showed that ASD was a risk factor for mainstream primary school children but not for mainstream post-primary children. The association between ASD and poverty was strongest in CWA attending Special Schools, although CWA who attended mainstream schools also were more likely than COA to live in the most deprived areas (YPBAS, 2010).

NIMDM secondary data analysis showed that deprivation rose between 2006 and 2013, specifically for CWA attending mainstream schools. These findings may be a reflection of the general global economic down turn that clearly has had wide-ranging effects in NI. However, given that these changes were not reflected in families of

COA, it was unlikely that rising levels of deprivation for families affected by autism was solely related to the global economic crisis.

These findings were even more significant in light of the ratification of the UN CRPD in 2009 and the intense focus on ASD over recent years, including awareness raising campaigns and the development of the Autism Act (2011) NI and the Autism Strategy (DHSSPS, 2014). Despite all these efforts, CWA and their families experience greater deprivation and poverty in 2013 than they did in 2006.

Collectively, secondary analyses from a range of data sources exposed a link between ASD and poverty and deprivation. In addition, we found that this association intensified since 2006. No data sets were available to establish poverty and deprivation in adults with ASD (AWA), although unemployment and housing discussed in the next section indicate considerable levels of poverty for AWA.

Right to work

In line with UN CRPD Article 27 (Work and Employment), the Autism Strategy (DHSSPS, 2014) identified employment opportunities for AWA as a priority, although it did not mention the employment rights of parents/caregivers.

According to the secondary analysis of MCS data, in the UK there was a sizable association between family employment status and having a CWA. Parents/caregivers of families of young CWA were more likely to experience unemployment, regardless of whether they were single parents or not. Their decision not to enter employment was largely influenced by the caring needs of the CWA, rather than by other factors, such as job availability or qualifications. This was further evidenced by analysis of YPBAS data sets that indicated that employment was affected adversely in families of CWA. In other words, a qualified and able workforce was not engaged in available employment due to caregiving responsibilities. These findings support earlier reports that, if support needs were met adequately in schools these parent/caregivers would be available, qualified, and eager to pursue employment (Dillenburger et al., 2012).

Rosenblatt (2008) reported that only 15% of AWA were in gainful employment. There were no available data sets to verify this figure for NI. Although a number of projects focussed explicitly on employment for AWA, numbers of AWA who had

gained employment through these projects were low. Therefore, it was impossible to establish a baseline against which progress can be measured. Clearly, there is a need to establish local employment rates for AWA; adding an ASD category into some of the routine monitoring systems could collect these data quite easily.

Physical and mental health

Article 25 (Health) and Article 26 (Habilitation and Rehabilitation) of the UN CRPD were reflected in the Autism Strategy (DHSSPS, 2014). They aim to 'promote the physical, psychological, emotional and social health and wellbeing of people living with autism and their families and carers' (Strategic Priority 6, p.61).

The MCS dataset provided a rich source of information on the mental and physical health of young children before, during, and after their diagnosis of ASD. From as early as 9 months, parents of children who were later diagnosed with ASD were more likely to report concerns about the child's current health and developmental status (e.g. hearing, seeing, movement, slow development). From 3 years of age, more detailed information was available from MCS on the health of the children. The analysis of these data indicated that pre-diagnosis CWA were more likely to have had difficulties with walking on level ground, speech and language, hearing, eyesight, and asthma. At 5 years of age, an association between ASD and both ADHD and bed-wetting was found.

The Strength and Difficulties Questionnaire (SDQ) provided a parent-report measure of their child's emotional and social health. Right across time, i.e., when the child was aged 3, 5, and 7 years of age, CWA were reported to have poorer emotional and social health than COA. While the difference in emotional and social health between CWA and COA was clearly apparent at 3 years of age it had increased significantly by 7 years of age.

The increasing levels of child behaviour, social, and emotional problems, as measured by the SDQ, were mirrored by worsening mental health for mothers of CWA as the children grew older. While the mental health of mothers of 3-year old CWA was poorer than that of mothers of COA, this difference increased significantly by the time the child was aged 7 years.

Parental life satisfaction statistics also showed a clear downward trend specifically for mothers of CWA. Pre-diagnosis, when the child was young, i.e., 9 months of age, the life satisfaction of these mothers was similar to that of mothers whose children were later not diagnosed with ASD (COA). However, as the children grew older, i.e., post-diagnosis at 5 and 7 years of age, differences became apparent, with mothers of CWA reporting lower levels of life satisfaction than mothers of COA.

Clearly coming to terms with the diagnosis of ASD is a stressful experience for parents (Casey, Zankas, Meindl, Parra, Cogdal, & Powell, 2012), however, data reported here from the MCS show that parents were able to come to terms with an early diagnosis, i.e., difference in maternal mental health were small when the child was 3 years of age. However, life after diagnosis as the children grow older, i.e., by the time they were 7 years of age, seemed to be more stressful. Considering data from the SDQ, it was most likely that the children's increasing behaviour, social and emotional problems, as they grew older, affected maternal mental health adversely. As evidenced earlier, these children also missed out on schooling.

Most of these problems would be preventable through evidence-based early behaviour analytic interventions (Dawson, 2008) and therefore these interventions have been widely endorsed across the globe for a long time (e.g., National Standards Project, 2009; National Research Council, 2001; Surgeon General, 1999; Ontario, 2002). The absence of local statutory support for early intensive behaviour analytic interventions (Dillenburger, McKerr, & Jordan, 2014) evidently leads to worryingly poor long-term outcomes (Howlin et al., 2014), especially with regards to social and emotional health of CWA as they grow older and subsequently poor mental health of caregivers of CWA.

Full participation in social/cultural life

Participation in political and social life (Article 29) and in cultural life, recreation, leisure and sport (Article 30) were enshrined as rights in the UN CRPD. The new Autism Action Plan (2013-16; DHSSPS, 2014) reflected these targets aiming to "Improve access to sport, arts, leisure and other cultural activities so that people with autism can be part of the community."(Strategic Priority 14, p. 76)

The MCS provided some baseline data with regards to the extent of inclusion of CWA in the community. When the MCS children were aged 5 and 7 years, having an

ASD diagnosis was strongly associated with not having any friends outside of school. Social integration difficulties were also evident from the YPBAS 2010 of older CWA aged 11-16 years in mainstream education, who reported lower levels of satisfaction with their social relationships than COA. The overwhelming majority of CWA and AWA want to spend more time socialising (Stewart, 2008; Bauminger & Kasari, 2000) but clearly just contact alone was not enough to ensure the development of social relationships and friendships. As mentioned before, there is ample research showing the importance of interventions that focus on social skills, such as peer tutoring, social skills groups, and friendship circles (Miller, Cooke, Test, & White, 2003).

Living in safety

Article 13 of the UN CRPD focuses on Justice and the Autism Strategy (DHSSPS, 2014) includes the strategic priority to "Ensure that people with autism are treated equally by the law, have access to justice and can live safely in their own community"(p.74).

We were unable to source any data sets regarding criminal offending of AWA, and therefore a baseline against which to evaluate the effectiveness of the Autism Strategy could not be established with regard to offending.

However, we were able to locate some data sets with regard to living in safety and found that, compared to COA at 7 years of age, CWA had been bullied much more frequently, i.e., several or many times. These data, while not precise enough to draw conclusions, were not surprising. Lack of friends and problems with bullying are well known and a well researched phenomena for CWA. What is missing are the implementation of evidence-based interventions, including social skills programmes for CWA and their neuro-typical classmates (Heward, 2008; Heward et al, 2004).

Future data sweeps of NISALD and PSNI hate crime statistics should include an ASD category so that data can be provided on ASD, hate crime, offending, and fear of crime.

Other aspects of poverty and social exclusion

We were unable to source suitable data sets in the following areas:

- Freedom from accessibility barriers;
- Appropriate housing.

There were no available data sets on these aspects to allow us to establish a baseline, even though the Autism Action Plan (2013-2016; DHSSPS, 2014) highlights these as important outcome areas. More specifically the Action Plan highlights the following actions/outcomes as important (not an exhaustive list):

1) Barriers removed enabling easier access for people with autism to the physical environment and goods and services;
2) Supported living options available for people with autism through DSD's Supporting People Programme;
3) Life skills training provided to help support independent living options (p, 90, 101).

Had there been an autism sub-category, data on these factors could have been gathered through the NISALD, which asked about difficulties encountered when trying to access services as well as fears about crime. In addition, if an ASD variable were to be included, the NI Travel Survey could be used as a rich data source regarding on accessing transport.

Summary

Data on poverty and social exclusion related to CWA, particularly for young children were relatively widely available. CWA tended to miss a considerably greater amount of education and schooling than COA. Socially, CWA were less likely to have friends outside school and lower levels of satisfaction with social relationships were reported. In terms of educational outcomes, children with autism were less likely to enjoy and more likely to miss school.

Data reported here also show that CWA in mainstream education were much less likely than COA to achieve 5+ GCSEs A*-C.

While we know more about what CWA do when they leave in mainstream education, we still know very little about the destinations of CWA who attend special school. This should be monitored to ensure that ambitions for CWA in special schools are raised.

Data regarding Further and Higher Education reported here make a significant contribution to this under researched area as well as proving baseline data for the Autism Strategy. For example, we found numbers of HE students with ASD (SWA) nearly doubled since 2010 and reached almost 0.5 % of the total HE student population in NI. This is about half of the present estimate of ASD in the general population (present estimate: 1.1%; CDC, 2012) and given that approx. 50-70% of persons with ASD also have Intellectual Disabilities (ID) i.e., non-verbal Intelligence Quotient (IQ) below 70 (Matson & Shoemaker, 2009) and thus would not normally be expected to attend HE, SWA appear to be well represented at HE institutions in NI. It seems that the widening participation strategy (DEL, 2012) already has had a significant impact with regards to SWA. Of course, growing numbers of CWA in the school population (overall 1.8%) mean that future increases in HE students with ASD are to be expected.

Outcomes and prevalence data on adults with autism (AWA) were lacking, with the exceptions of Higher Education and disability specific employment programmes. This made it difficult to establish the counterfactual level of poverty and social exclusion amongst AWA and thus establish a baseline against which to assess the effectiveness of the Autism Strategy. We have made a number of recommendations for changes to administrative systems/surveys that would produce outcomes data for adults with ASD. Notable gaps for adults with autism include: prevalence; employment rate; outcomes data for training and employment programmes. For both AWA and CWA there was a lack of data on hate crime and barriers to travel and these data could be gathered effectively, if existing data sources, such as the NI travel survey and PSNI hate crime statistics, would include an ASD variable.

Technical detail

The Millennium Cohort Study

The Millennium Cohort Study (MCS) datasets were accessed via the UK Data archive. The original data creators, depositors or copyright holders, the funders of the Data Collections and the UK Data Archive bear no responsibility for the analysis and interpretation presented in this section.

Preliminary analysis using the whole UK dataset (including NI) revealed that generally group differences were small and not statistically significant at NI level, due to the small NI specific sample. Therefore, in order to prevent misleading conclusions, the UK analysis is presented and generalisations are made for the NI context.

Data presented in this section were weighted in accordance with the guidelines set out in the *Millennium Cohort Study: User guide to Analysing MCS data using SPSS, 1st edition* (Jones & Ketende, November, 2010). Furthermore, guidance from *The Millennium Cohort Study: User guide to analysing MCS data using STATA* (Ketende & Jones, December 2011) was used, e.g., regarding longitudinal analysis (p12), such that weights from Wave 4, were used for all analyses.

Due to the large number of statistical comparisons carried out when analysing the Millennium Cohort Study dataset, the Holm-Bonferroni method (Holm, 1979) was employed. For all significant differences, effect sizes were calculated as measured by Cohens d. The actual effect sizes are presented underneath each corresponding descriptive table in the Appendices. To make this section as reader friendly as possible we refer to 'small, medium, and large effect sizes' as 'small, medium, and large differences' in the text. These are purely statistical conventions used to give a standardised indication of the size of a difference between two groups. 'Size of difference' should not be confused with 'importance of a difference'. Sometimes even small differences can be important, and it is up to the reader to make judgements regarding the importance of an effect size difference.

In most cases, non-response as well as *non-applicable* and *don't know* responses were recorded as missing in the Millennium Cohort Study datafile by default. For the purpose of the present report the default missing value specification of the datafile were kept for the most part, except where it did not make sense to do so. For example, life satisfaction was measured with a scale ranging from 1 (completely dissatisfied) to 10 (completely satisfied), and 'can't say' was coded as 11 in the original datafile. Coding 'can't say' responses as missing prevented scores in the analysis from being skewed towards greater levels of life satisfaction. In addition, for some variables such as 'asthma at Wave 2' (i.e. does the child have asthma at age 3 years), 'don't know' responses were recorded in the original datafile as not missing. This approach was inconsistent with the coding of other similar variables in the original datafile. Furthermore, 'don't know' responses were too low for meaningful analysis and were therefore recoded for all aspects of analysis in this report as missing. All missing values were excluded from the statistical analysis.

Young Person's Behaviour and Attitudes Survey

There are several weight variables in the YPBAS dataset that can be used to adjust for non-response bias, and these are referred to in the dataset as 'W1', 'W2' and 'W1 by W2'. The 'W1' variable adjusts the data to make it representative by gender, year group and religion, while 'W2' provided representativeness by ELB, school type, and management group. All figures presented here were weighted by the 'W1 by W2' weight, which is a combination of the 'W1 and 'W2' weight variables, and adjusts the data to provide representativeness by gender, year group, religion, ELB, school type, and management group.

There were a number of issues that made analysis difficult:
1) Not all questions were asked of all 7,616 participants. In fact, only a handful of questions were asked of all participants. Only those questions asked of all participants were considered here for analysis (i.e. included on both Version A and B of the questionnaire).
2) Amongst those questions that were asked of all participants, many were categorical and the cell sizes of a number of the subcategories were very small (i.e. less than 5). In some cases, categories were combined to overcome this problem; however, where

this was not possible variables including categories with very small cell sizes were not included.
3) The sample size of the ASD group was relatively small. Therefore, the number of statistical comparisons was restricted. Essentially, statistical tests were not included if they would have necessitated statistical adjustments and thus reduced the detection of potential differences.

The actual questions that were selected for analysis are included in Appendices 3.1-3.4. Compared to the analysis carried out on the Millennium Cohort Study (Section 3.1), the analysis of YPBAS was less powerful. Essentially, the larger sample size of the Millennium Cohort Study that stemmed from parent self-reports allowed for the detection of some small differences between CWA and COA. By contrast the relatively smaller sample size of the YPBAS that stemmed from pupil self-reports, only allowed for the detection of medium or large differences.

Multiple Exclusion and Homelessness survey

The data were weighted using the 'AllScaledWeight' variable in accordance with the dataset guidelines (Fitzpatrick, S. et al., 2010). The data were weighted because the survey employed disproportionate sampling and to account for non-response bias.

Northern Ireland Life and Times Survey 2003 and 2012

All figures presented here have been weighted in accordance with guidelines outlined in the NILT Survey technical reports (Devine, 2003, 2012).

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Millennium Cohort Study Appendices 1.1 – 1.53

Survey questions

Appendix 1.1: Autism at age 5 years question and response options.

Has a doctor or health professional ever told you that [^Cohort child's name] had any of the following problems?

Autism or Asperger's Syndrome

1 Yes
2 No

Appendix 1.2: Autism at age 7 years question and response options.

(Has a doctor or health professional ever told you that [^Cohort child's name] had any of the following problems?)

Autism, Asperger's Syndrome or other autistic spectrum disorder

1 Yes
2 No

Appendix 1.3: Autism at 11 years question and response options (Note, if the respondent had reported at the previous interview that their child had autism this question was not asked)

(Has a doctor or health professional ever told you that [^Cohort child's name] had any of the following problems?)
|
| Autism, Asperger's Syndrome or other autistic spectrum disorder?
|
| 1 Yes
| 2 No

Appendix 1.4: Reason for additional support needs (Scotland) /special education needs (Wales, England and Northern Ireland) questions and response options.

What are the reasons for [^Cohort child's name]'s additional support needs? (Scotland only)
CODE ALL THAT APPLY
01 Dyslexia
02 Learning difficulties (including dyspraxia and dyscalculia)
03 Attention Deficit and Hyperactivity Disorder (ADHD)
04 Autism, Asperger's syndrome or autistic spectrum disorder
05 Behavioural problems/hyperactivity
06 Problem with speech or language
07 Problem with sight
08 Problem with hearing
09 Other physical disability
10 Medical or health problem
11 Mental illness/depression

12 Gifted/High IQ/More able and talented/Highly Able
13 English as an additional language
14 Young carer or sibling of a disabled child
15 Bullying
16 Bereavement
95 Other reason (PLEASE SPECIFY)
[Code maximum 17 out of 17 possible responses]

What are the reasons for [^Cohort child's name]'s special educational needs? (England, Wales and Northern Ireland)
CODE ALL THAT APPLY
1 Dyslexia
2 Learning difficulties (including dyspraxia and dyscalculia)
3 Attention Deficit and Hyperactivity Disorder (ADHD)
4 Autism, Asperger's syndrome or autistic spectrum disorder
5 Behavioural problems/hyperactivity
6 Problem with speech or language
7 Problem with sight
8 Problem with hearing
9 Other physical disability
10 Medical or health problem
11 Mental illness/depression
12 Gifted/High IQ/More able and talented/Highly Able
95 Other reason (PLEASE SPECIFY)
Code maximum 13 out of 13 possible responses

Appendix 1.5: Managing financially when child is aged 3 years question and response options.

How well would you say you (and your wife/husband/partner are managing financially these days? Would you say you are ….. READ OUT

1 Living comfortably
2 Doing alright
3 Just about getting by
4 Finding it quite difficult
5 Or, finding it very difficult

Appendix 1.6: Reason main respondent was not seeking work when their child was aged 7 years question and response options.

IF NOT looking for paid work
IF NOT LOOKING AND MAIN RESPONDENT
Why is that? PROBE: What other reasons?
CODE ALL THAT APPLY
01 There are no jobs in the right place for me
02 There are no jobs with the right hours for me
03 There are no jobs available for me
04 I am in full-time education
05 I am on a training course

06 My family would lose benefits if I was earning
07 I am caring for an elderly or ill relative or friend
08 I cannot work because of poor health
09 I prefer not to work
10 Prefer to be at home with the family rather than working
11 I prefer to look after my children myself
12 I cannot earn enough to pay for childcare
13 I cannot find suitable childcare
14 My husband/partner disapproves
15 I have a new baby
95 Other reason (specify) [code maximum 16 out of 16 possible responses]

Appendix 1.7: Managing financially when child is aged 7 and 11 years question and response options.

How well would you say you [^and your husband/wife] are managing financially these days? Would you say you are ... READ OUT ...
1 living comfortably,
2 doing alright,
3 just about getting by,
4 finding it quite difficult or
5 finding it very difficult?

Appendix 1.8: Behind with the bills when the child is aged 7 years question and response options (Northern Ireland)

Some families are not able to pay every bill when it falls due. May I just check, are you up-to- date with the bills on this card or are you behind with any of them? CODE ALL THAT APPLY

01 Behind with the electricity bill
02 Behind with the gas bill
03 Behind with other bills like coal or oil
04 Behind with rates
05 Behind with insurance policies
06 Behind with telephone bill
07 Behind with television/video rental or HP
08 Behind with other HP payments
10 Behind with credit card payments
11 Behind with bank or loan repayments
12 Not behind with any of these
[code maximum 10 out of 11 possible responses]

Appendix 1.9: Behind with the bills when the child is aged 7 years question and response options (England, Scotland & Wales)

Some families are not able to pay every bill when it falls due. May I just check, are you up-to- date with the bills on this card or are you behind with any of them? CODE ALL THAT APPLY

01 Behind with the electricity bill

02 Behind with the gas bill
03 Behind with other bills like coal or oil
04 Behind with council tax
05 Behind with insurance policies
06 Behind with telephone bill
07 Behind with television/video rental or HP
08 Behind with other HP payments
09 Behind with water rates
10 Behind with credit card payments
11 Behind with bank or loan repayments
12 Not behind with any of these
[code maximum 11 out of 12 possible responses]

Appendix 1.10: Kessler mental health questions and response options

Response options

1 All of the time
2 Most of the time
3 Some of the time
4 A little of the time
5 None of the time
6 Can't say

Questions

The next few questions are about how you have felt over the last 30 days.

1) During the last 30 days, about how often did you feel so depressed that nothing could cheer you up?

2) During the last 30 days, about how often did you feel hopeless?

3) During the last 30 days, about how often did you feel restless or fidgety?

4) During the last 30 days, about how often did you feel that everything was an effort?

5) During the last 30 days, about how often did you feel worthless?

6) During the last 30 days, about how often did you feel nervous?

Appendix 1.11: Life satisfaction scale.

Scale at child age 9 months

Here is a scale from 1-10 where '1' means that you are completely dissatisfied and '10' means that you are completely satisfied.
Please enter the number which corresponds with how satisfied or dissatisfied you are about the way your life has turned out so far.
[1]------- [2]------- [3]---- -- [4]---- --- [5]----- -- [6]----- -- [7]---- --- [8]---- -- [9]--- ---[10]
completely dissatisfied — completely satisfied

Scale at child age 3, 5, and 7 years

Here is a scale from 1-10 where '1' means that you are completely dissatisfied and '10' |means that you are completely satisfied. | Please enter the number which corresponds with how satisfied or dissatisfied you are | about the way your life has turned out so far.

[1]--------[2]--------[3]--------[4]--------[5]-------[6]--------[7]--------[8]--------[9]--------[10]-------- [11]
Completely dissatisfied — Completely satisfied — Can't say
Range: 1..11

Scale at age 11 years

Here is a scale from 1-11 where '1' means that you are completely dissatisfied and '11' means that you are completely satisfied.
Please enter the number which corresponds with how satisfied or dissatisfied you are about the way your life has turned out so far.

[1]---[2]----[3]-------[4]-------[5]-------[6]-------[7]-------[8]-------[9]-------[10]-------[11]
Completely dissatisfied — Completely satisfied

If you don't know or don't wish to answer, enter 12

Appendix 1.12: Child's health at birth question and response options

Was there anything wrong with ^Jack at the time of birth or at any time during the first week?
CODE ALL THAT APPLY

1 No problems [exclusive code]
2 Delay in breathing at birth
3 Breathing difficulty or distress in first week
4 Jaundice requiring hospital treatment
5 Infection or suspected infection
94 Other problems in first week
95 Other problems at birth

Appendix 1.13: Child's health at nine months question and response options

Note this question excludes some issues discussed in questions prior to this in the survey such as crying.
Do you have any worries about ^Jack's health and development that we have not talked about?

1 No, none [exclusive code]
2 Problems with hearing
3 Problems with seeing
4 Problems with movement
5 Slow development
6 Problems in making noises or learning to speak
95 Other worries

Appendix 1.14: Child's health at three years questions and response options

Now I'd like to ask you about some other health problems ^ Jack might have had.
Has a doctor ever said ^ Jack has had any of the following?
READ OUT & CODE ALL THAT APPLY

1 Minor fits
2 Seizure
3 Epilepsy
4 Febrile fits or convulsion
5 Fainting
6 Blackouts
7 None of these

Has ^ Jack ever had asthma?
1 Yes
2 No
3 Don't know

Now I'd like to ask some questions about ^ Jack's hearing.
Has ^ Jack ever had a problem with his/her hearing?

I'd now like to ask some questions about ^ Jack's eyesight.
Has ^ Jack ever had any problem(s) with his/her eyesight or his/her eyes?

Has ^ Jack ever had eczema or hay fever?

1 Yes
2 No
3 Don't know

Is ^ Jack able to walk on the level without difficulties?
1 Yes
2 No

Do you have any concerns about ^ Jack's speech and language?
IF YES: What are your concerns? MULTICODE
1 No concerns
2 His/her language is developing slowly
3 S/he doesn't seem to understand other people
4 S/he pronounces words poorly
5 S/he doesn't hear well
6 S/he stutters
7 Other

Appendix 1.15: Child's health at five years questions and response options.

Has a doctor or health professional ever told you that [^Cohort child's name] had any of the following problems?
Attention Deficit and Hyperactivity Disorder (ADHD)
1 Yes

2 No

Which of these best applies to [^Cohort child's name]?
|
| INTERVIEWER: IF OTHERS IN ROOM, 'You can tell me which number applies'
| 1 Never wets the bed at night
| 2 Occasionally wets the bed at night
| 3 Wets the bed at night once or twice a week
| 4 Wets the bed at night three or more times a week
| 5 Wears nappies or pull-ups at night

Appendix 1.16: Questions used to create the Happiness scale

On a scale of 1 to 7 where '1' means completely happy and 7 means not at all happy, how do you feel about the following parts of your life? (Please note for the purposes of analysis the question scales were recoded as follows 7=0, 6=1, 5=2, 4=3, 3=4, 2=5, 1=6, so that when the 6 questions were added together the Happiness scale ranged from 0 – 36, with higher scores indicating greater happiness)

A. How do you feel about your school work?
B. How do you feel about the way you look?
C. How do you feel about your family?
D. How do you feel about your friends?
E. How do you feel about the school you got to?
F How do you feel about your life as a whole

Appendix 1.17: Questions used to create the Self Esteem scale

How much do you agree or disagree with the following statements about you. Respondents indicated their agreement using the following scale: 1 strongly agree, 2 Agree, 3 Disagree, 4 Strongly disagree. (Please note for the purposes of analysis the question scales were recoded as follows 4=0, 3=1, 2=2, 1=3, so that when the 4 questions were added together the Happiness scale ranged from 0 – 12, with higher scores indicating greater self esteem).

A. On the whole, I am satisfied about myself
B. I feel that I have a number of good qualities
D. I am a person of value
E. I feel good about myself

Appendix 1.18: Strength and Difficulties Questionnaire scale items.

For each item, please press the appropriate number for 'Not True', 'Somewhat True'or 'Certainly True'. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft!
Please give your answers on the basis of the child's behaviour over the last six months.

Emotional symptoms scale
Often complains of headaches, stomach-aches or sickness
Many worries, often seems worried

Often unhappy, down-hearted or tearful
Nervous or clingy in new situations, easily loses confidence
Many fears, easily scared

Conduct problems scale
Often has temper tantrums or hot tempers
Generally obedient, usually does what adults request
Often fights with other children or bullies them
Often argumentative with adults (age 3 years)
Often lies or cheats (age 5 and 7 years)
Can be spiteful to others (age 3 years)
Steals from home, school or elsewhere (age 5 and 7 years)

Hyperactivity scale
Restless, overactive, cannot stay still for long
Constantly fidgeting or squirming
Easily distracted, concentration wanders
Can stop and think about things before acting
Sees tasks through to the end, good attention span

Peer problems
Rather solitary, tends to play alone
Has at least one good friend
Generally liked by other children
Picked on or bullied by other children
Gets on better with adults than with other children

Appendix 1.19: Enjoyment of school

Ages 5 and 7 years question and response options.

Does [^Cohort child's name] enjoy going to school?
1 Always
2 Usually
3 Sometimes
4 Not at all

Age 11 years question and response options.

Now I'd like to ask a few questions about how [^Cohort child's name] feels about school.
How often does [^Cohort child's name] enjoy school?
1 Always
2 Usually
3 Sometimes
4 Never

Appendix 1.20: Reluctance to go to school at ages 5 and 7 years question and response options.

How often, if at all, is [^Cohort child's name] upset or reluctant to go to school?
1 Every day

2 Several times a week
3 Once or twice a week
4 Once or twice a month
5 Less often
6 Not at all

Appendix 1.21: Temporary exclusion/suspension question at child age 11 years

Has [^Cohort child's name] ever been temporarily suspended or temporarily excluded from school for at least one day?
1 Yes
2 No

Appendix 1.22: Permanent exclusion question at child age 11 years

Has [^Cohort child's name] ever been expelled or permanently excluded from school?
1 Yes
2 No

Appendix 1.23: Bullied at school aged 7 question and response options.

How often, if at all, has [^Cohort child's name] been bullied at school?
1 Never
2 Once or twice
3 Several times
4 Many times

Appendix 1.24: Friends outside school

Ages 5 and 7 years question and response options.

How often does [^Cohort child's name] spend time with [^his/her] friends outside school?
1 Every day or almost every day
2 Several times a week
3 Once or twice a week
4 Once or twice a month
5 Less often
6 Not at all

Ages 11 years question and response options.

Apart from at school, how often does [^Cohort child's name] spend time with [^his/her] friends?

1 Every day or almost every day
2 Several times a week
3 Once or twice a week
4 Once or twice a month
5 Less often than once a month
6 Not at all

Appendix 1.25 Main respondent's perception of how easy or difficult the move to secondary school will be.

How easy or difficult do you think [^cohort child's name] will find moving to secondary
school?

INTERVIEWER: IF OTHERS IN ROOM, 'You can tell me which number applies'

1 Very easy
2 Fairly easy
3 Neither easy nor difficult
4 Fairly difficult
5 Very difficult

Appendix 1.26: Main respondent wants child to stay on at school question and response options.

Would you like [^Cohort child's name] to stay on full-time education after the minimum school leaving age, that is, after 16 years of age? INTERVIEWER: IF REPLIES 'It is up to child', PROBE: Would YOU like [^Cohort child's name] to stay on in education (after the minimum school leaving age)?
1 Yes 2 No

Appendix 1.27: Prevalence of autism when the study child was aged 7 years

		Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
				Lower	Upper	
Frequency	Yes	232.70	22.19	189.07	276.34	209
	No	13,527.27	486.27	12,571.23	14,483.31	13,552
	Total	13,759.97	495.12	12,786.53	14,733.42	13,761
% of Total	Yes	1.69%	0.15%	1.43%	2.01%	1.52%
	No	98.31%	0.15%	97.99%	98.57%	98.48%
	Total	100.00%	0.00%	100.00%	100.00%	100.00%

Appendix 1.28: Prevalence of autism when the study child was aged 5 years

		Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
				Lower	Upper	
Frequency	Yes	142.90	15.95	111.54	174.26	132
	No	15,384.98	551.07	14,301.52	16,468.43	15,027
	Total	15,527.88	555.76	14,435.21	16,620.56	15,159
% of Total	Yes	0.92%	0.10%	0.75%	1.13%	0.87%
	No	99.08%	0.10%	98.87%	99.25%	99.13%
	Total	100.00%	0.00%	100.00%	100.00%	100.00%

Appendix 1.29: Prevalence of autism when the study child was aged 11 years

		Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
				Lower	Upper	
Frequency	Yes	563.48	39.92	485.00	641.96	408
	No	15,662.08	588.67	14,504.70	16,819.46	12,768
	Total	16,225.56	609.78	15,026.68	17,424.44	13,176
% of Total	Yes	3.47%	0.21%	3.09%	3.90%	3.10%
	No	96.53%	0.21%	96.10%	96.91%	96.90%
	Total	100.00%	0.00%	100.00%	100.00%	100.00%

Appendix 1.30: Prevalence of children with special educational needs/additional support needs due to autism/aspergers.

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	83.08	12.14	59.22	106.95	70
		Yes	146.50	16.26	114.53	178.47	137
		Total	229.58	22.12	186.10	273.06	207
	% of Total	No	36.19%	3.82%	29.07%	43.97%	33.82%
		Yes	63.81%	3.82%	56.03%	70.93%	66.18%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	13,472.53	482.98	12,522.96	14,422.11	13,505
		Yes	12.27	3.97	4.46	20.08	11
		Total	13,484.81	483.55	12,534.11	14,435.50	13,516
	% of Total	No	99.91%	0.03%	99.83%	99.95%	99.92%
		Yes	0.09%	0.03%	0.05%	0.17%	0.08%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Appendix 1.31: Prevalence of children with special educational needs/additional support needs due to learning difficulty.

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	186.95	20.29	147.06	226.84	169
		Yes	42.63	7.99	26.93	58.33	38
		Total	229.58	22.12	186.10	273.06	207
	% of Total	No	81.43%	3.21%	74.28%	86.95%	81.64%
		Yes	18.57%	3.21%	13.05%	25.72%	18.36%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	13,178.63	470.90	12,252.81	14,104.46	13,224
		Yes	306.17	27.27	252.55	359.80	292
		Total	13,484.81	483.55	12,534.11	14,435.50	13,516
	% of Total	No	97.73%	0.18%	97.35%	98.05%	97.84%
		Yes	2.27%	0.18%	1.95%	2.65%	2.16%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Appendix 1.32: OECD equivalised income (£) from 9 months to 11 years

	OECD equivalised income (£)	Weighted Estimate (mean £)	Standard Error	95% Confidence Interval		Unweighted Count (N)
				Lower	Upper	
autism/ asperger's	Child age 9 months	282.86	16.02	251.36	314.36	198
	Child age 3 years	282.18	17.53	247.73	316.64	181
	Child age 5 years	320.38	15.39	290.11	350.64	199
	Child age 7 years	348.31	16.32	316.22	380.40	209
	Child age 11 years	485.25	19.81	446.31	524.19	177
without autism/ asperger's	Child age 9 months	310.37	5.54	299.48	321.26	12,942
	Child age 3 years	342.12	6.68	328.99	355.26	12,230
	Child age 5 years	359.69	6.19	347.52	371.87	12,830
	Child age 7 years	390.22	5.81	378.81	401.64	13,373
	Child age 11 years	549.48	6.70	536.31	562.65	11,763

Child age 9 months: Weighted count autism/aspergers = 213.61 weighted count without autism/aspergers = 12806.63; Wald F (1, 389) = 3.514, p=.062; Cohen's d=0.1293; CI (95%) -0.0059 to 0.2646.
Child age 3 years: Weighted count autism/aspergers = 203.447 weighted count without autism/aspergers = 12245.945; Wald F (1, 389) = 11.063, p=.001; Cohen's d=0.2351; CI (95%) 0.0965 to 0.3737.
Child age 5 years: Weighted count autism/aspergers = 221.867 weighted count without autism/aspergers = 12808.436; Wald F (1, 389) = 7.260, p=.007; Cohen's d=0.1825; CI (95%) 0.0497 to 0.3152. Non-significant when Holm-Bonferroni correction was applied.
Child age 7 years: Weighted count autism/aspergers = 232.703 weighted count without autism/aspergers = 13333.619; Wald F (1, 389) = 6.742, p=.010; Cohen's d=0.1717; CI (95%) 0.0421 to 0.3013. Non-significant when Holm-Bonferroni correction was applied.
Child age 11 years: Weighted count autism/aspergers = 197.322 weighted count without autism/aspergers = 11693.757; Wald F (1, 389) = 11.016, p=.001; Cohen's d=0.2383; CI (95%) 0.0975 to 0.379.

Appendix 1.33: Proportion of families where neither parent is in work: child ages 9 months, 3 years 5 years and 7 years

Study child age 9 months

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Both in work	72.50	9.79	53.24	91.75	72
		2) Main in work, partner not	4.09	1.99	0.18	8.00	5
		3) Partner in work, main not	70.64	9.95	51.08	90.20	67
		4) Both not in work	20.64	6.01	8.82	32.46	16
		5) Main in work or on leave, no partner	7.49	3.29	1.02	13.97	11
		6) Main not on work nor on leave, no partner	38.75	9.54	20.00	57.50	28
		Total	214.11	20.77	173.27	254.94	199
	% of Total	1) Both in work	33.86%	3.77%	26.88%	41.62%	36.18%
		2) Main in work, partner not	1.91%	0.92%	0.74%	4.87%	2.51%
		3) Partner in work, main not	32.99%	3.79%	26.00%	40.83%	33.67%
		4) Both not in work	9.64%	2.52%	5.69%	15.86%	8.04%
		5) Main in work or on leave, no partner	3.50%	1.46%	1.53%	7.82%	5.53%
		6) Main not on work nor on leave, no partner	18.10%	3.81%	11.77%	26.80%	14.07%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Both in work	5,654.12	227.62	5,206.60	6,101.65	5,896
		2) Main in work, partner not	272.11	22.86	227.16	317.05	289
		3) Partner in work, main not	4,141.27	169.65	3,807.72	4,474.82	4,035
		4) Both not in work	869.04	58.35	754.32	983.75	916
		5) Main in work or on leave, no partner	486.06	34.73	417.78	554.34	483
		6) Main not on work nor on leave, no partner	1,518.68	87.01	1,347.60	1,689.75	1,444
		9) Main in work, partner status unknown	3.01	2.10	-1.12	7.13	2
		10) Main not in work, partner status unknown	3.35	1.80	-0.19	6.88	4
		Total	12,947.62	466.28	12,030.88	13,864.36	13,069
	% of Total	1) Both in work	43.67%	0.84%	42.02%	45.34%	45.11%
		2) Main in work, partner not	2.10%	0.15%	1.82%	2.43%	2.21%
		3) Partner in work, main not	31.98%	0.64%	30.74%	33.26%	30.87%
		4) Both not in work	6.71%	0.38%	6.01%	7.49%	7.01%
		5) Main in work or on leave, no partner	3.75%	0.23%	3.34%	4.22%	3.70%
		6) Main not in work nor on leave, no partner	11.73%	0.51%	10.76%	12.77%	11.05%
		9) Main in work, partner status unknown	0.02%	0.02%	0.01%	0.09%	0.02%
		10) Main not in work, partner status unknown	0.03%	0.01%	0.01%	0.07%	0.03%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 4 & 6 versus all other codes. Pearson Chi Square (1, 389) = 12.119; p=.008; Cohen's d=0.2917; CI (95%) 0.125 to 0.4585 . Non-significant after applying Holm-Bonferroni correction.

Study child age 3 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Both in work	60.862	8.792	43.577	78.147	63
		2) Main in work, partner not	3.747	2.366	-.906	8.400	6
		3) Partner in work, main not	60.271	10.714	39.207	81.335	54
		4) Both not in work	21.158	6.145	9.076	33.240	14
		5) Main in work or on leave, no partner	6.830	2.814	1.297	12.363	9
		6) Main not on work nor on leave, no partner	48.280	10.858	26.932	69.628	33
		10) Main not in work, partner status unknown	2.060	2.020	-1.912	6.032	1
		11) Main working status unknown, no partner	2.259	1.567	-.823	5.341	2
		Total	205.467	20.012	166.122	244.812	182
	% of Total	1) Both in work	29.62%	3.66%	22.97%	37.27%	34.62%
		2) Main in work, partner not	1.82%	1.15%	0.52%	6.16%	3.30%
		3) Partner in work, main not	29.33%	4.37%	21.52%	38.59%	29.67%
		4) Both not in work	10.30%	2.80%	5.94%	17.25%	7.69%
		5) Main in work or on leave, no partner	3.32%	1.38%	1.46%	7.39%	4.95%
		6) Main not on work nor on leave, no partner	23.50%	4.32%	16.08%	33.00%	18.13%
		10) Main not in work, partner status unknown	1.00%	0.98%	0.14%	6.63%	0.55%
		11) Main working status unknown, no partner	1.10%	0.76%	0.28%	4.18%	1.10%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Both in work	5,450.10	221.50	5,014.61	5,885.58	5,660
		2) Main in work, partner not	253.19	19.15	215.55	290.84	271
		3) Partner in work, main not	3,763.85	151.30	3,466.39	4,061.31	3,679
		4) Both not in work	679.14	47.78	585.20	773.07	707
		5) Main in work or on leave, no partner	701.13	45.76	611.15	791.10	670
		6) Main not on work nor on leave, no partner	1,437.70	78.07	1,284.20	1,591.20	1,270
		7) Main work status unknown, partner in work	1.33	1.30	-1.23	3.89	1
		9) Main in work, partner status unknown	3.83	2.13	-0.35	8.00	4
		10) Main not in work, partner status unknown	22.69	5.83	11.23	34.16	25
		11) Main working status unknown, no partner	39.75	9.93	20.22	59.28	34
		Total	12,352.70	442.16	11,483.38	13,222.02	12,321
	% of Total	1) Both in work	44.12%	0.83%	42.49%	45.76%	45.94%
		2) Main in work, partner not	2.05%	0.13%	1.80%	2.33%	2.20%
		3) Partner in work, main not	30.47%	0.63%	29.24%	31.72%	29.86%
		4) Both not in work	5.50%	0.32%	4.90%	6.16%	5.74%
		5) Main in work or on leave, no partner	5.68%	0.31%	5.10%	6.31%	5.44%
		6) Main not on work nor on leave, no partner	11.64%	0.48%	10.73%	12.62%	10.31%
		7) Main work status unknown, partner in work	0.01%	0.01%	0.00%	0.07%	0.01%
		9) Main in work, partner status unknown	0.03%	0.02%	0.01%	0.09%	0.03%

		10) Main not in work, partner status unknown	0.18%	0.05%	0.11%	0.30%	0.20%
		11) Main working status unknown, no partner	0.32%	0.08%	0.20%	0.52%	0.28%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 4 & 6 versus all other codes. Pearson Chi Square (1, 389) = 38.836; p<.001; Cohen's d=0.4981; CI (95%) 0.3367 to 0.6596

Study child age 5 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Both in work	61.40	8.94	43.83	78.96	63
		2) Main in work, partner not	3.96	1.83	0.36	7.55	6
		3) Partner in work, main not	71.09	11.73	48.03	94.14	60
		4) Both not in work	24.22	7.02	10.42	38.03	16
		5) Main in work or on leave, no partner	20.50	6.05	8.61	32.38	18
		6) Main not on work nor on leave, no partner	39.66	9.07	21.84	57.49	35
		10) Main not in work, partner status unknown	1.05	0.99	-0.89	2.99	1
		Total	221.87	21.63	179.35	264.38	199
	% of Total	1) Both in work	27.67%	3.31%	21.66%	34.61%	31.66%
		2) Main in work, partner not	1.78%	0.80%	0.73%	4.28%	3.02%
		3) Partner in work, main not	32.04%	4.41%	24.04%	41.26%	30.15%
		4) Both not in work	10.92%	2.85%	6.45%	17.89%	8.04%
		5) Main in work or on leave, no partner	9.24%	2.55%	5.30%	15.62%	9.05%
		6) Main not on work nor on leave, no partner	17.88%	3.62%	11.82%	26.12%	17.59%
		10) Main not in work, partner status unknown	0.47%	0.44%	0.07%	2.96%	0.50%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Both in work	5,970.05	233.70	5,510.58	6,429.52	6,185
		2) Main in work, partner not	323.91	25.38	274.00	373.82	369
		3) Partner in work, main not	3,318.86	133.08	3,057.22	3,580.50	3,260
		4) Both not in work	705.20	49.62	607.63	802.76	718
		5) Main in work or on leave, no partner	1,052.72	57.91	938.86	1,166.58	1,000
		6) Main not on work nor on leave, no partner	1,540.17	85.92	1,371.24	1,709.10	1,402
		9) Main in work, partner status unknown	4.59	3.62	-2.52	11.70	3
		Total	12,915.50	457.39	12,016.23	13,814.77	12,937
	% of Total	1) Both in work	46.22%	0.82%	44.61%	47.85%	47.81%
		2) Main in work, partner not	2.51%	0.17%	2.20%	2.86%	2.85%
		3) Partner in work, main not	25.70%	0.59%	24.55%	26.88%	25.20%
		4) Both not in work	5.46%	0.32%	4.87%	6.12%	5.55%
		5) Main in work or on leave, no partner	8.15%	0.32%	7.54%	8.81%	7.73%
		6) Main not on work nor on leave, no partner	11.92%	0.49%	11.00%	12.92%	10.84%
		9) Main in work, partner status unknown	0.04%	0.03%	0.01%	0.17%	0.02%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 4 & 6 versus all other codes. Pearson Chi Square (1, 389) = 19.597; p=.001; Cohen's d=0.3601; CI (95%) 0.198 to 0.5223

Study child age 7 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Both in work	64.03	9.34	45.66	82.39	61
		2) Main in work, partner not	7.32	2.79	1.84	12.80	7
		3) Partner in work, main not	58.76	10.48	38.16	79.37	50
		4) Both not in work	21.54	6.25	9.25	33.83	19
		5) Main in work or on leave, no partner	25.68	6.54	12.83	38.54	24
		6) Main not on work nor on leave, no partner	55.37	11.05	33.64	77.10	48
		Total	232.70	22.19	189.07	276.34	209
	% of Total	1) Both in work	27.51%	3.29%	21.54%	34.42%	29.19%
		2) Main in work, partner not	3.15%	1.15%	1.53%	6.37%	3.35%
		3) Partner in work, main not	25.25%	3.77%	18.57%	33.35%	23.92%
		4) Both not in work	9.26%	2.49%	5.38%	15.46%	9.09%
		5) Main in work or on leave, no partner	11.04%	2.64%	6.82%	17.38%	11.48%
		6) Main not on work nor on leave, no partner	23.79%	4.09%	16.69%	32.73%	22.97%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Both in work	6557.43	248.10	6069.65	7045.22	6,705
		2) Main in work, partner not	360.57	27.32	306.85	414.28	385
		3) Partner in work, main not	2887.54	127.90	2636.09	3139.00	2,921
		4) Both not in work	704.62	52.08	602.23	807.01	722
		5) Main in work or on leave, no partner	1473.30	74.02	1327.76	1618.83	1,390
		6) Main not on work nor on leave, no partner	1542.77	88.43	1368.92	1716.63	1,427
		9) Main not in work, partner status unknown	1.04	0.67	-0.29	2.36	2
		Total	13527.27	486.27	12571.23	14483.31	13,552
	% of Total	1) Both in work	48.48%	0.84%	46.82%	50.13%	49.48%
		2) Main in work, partner not	2.67%	0.17%	2.35%	3.03%	2.84%
		3) Partner in work, main not	21.35%	0.56%	20.27%	22.46%	21.55%
		4) Both not in work	5.21%	0.32%	4.61%	5.88%	5.33%
		5) Main in work or on leave, no partner	10.89%	0.37%	10.18%	11.64%	10.26%
		6) Main not on work nor on leave, no partner	11.40%	0.45%	10.54%	12.33%	10.53%
		9) Main not in work, partner status unknown	0.01%	0.00%	0.00%	0.03%	0.01%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 4 & 6 versus all other codes. Pearson Chi Square (1, 389) = 44.030; p<.001; Cohen's d = 0.5003, CI (95%) 0.3476 to 0.6529

Study child age 11 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Both in work	61.91	9.16	43.91	79.91	59
		2) Main in work, partner not	12.19	4.24	3.85	20.53	10
		3) Partner in work, main not	35.77	7.05	21.92	49.62	35
		4) Both not in work	25.37	6.71	12.16	38.57	18
		5) Main in work or on leave, no partner	20.09	5.20	9.88	30.31	21
		6) Main not in work nor on leave, no partner	42.00	9.49	23.34	60.65	34
		Total	197.32	19.64	158.72	235.93	177
	% of Total	1) Both in work	31.38%	3.65%	24.67%	38.96%	33.33%
		2) Main in work, partner not	6.18%	2.05%	3.18%	11.66%	5.65%
		3) Partner in work, main not	18.13%	3.28%	12.54%	25.47%	19.77%
		4) Both not in work	12.85%	3.02%	7.99%	20.03%	10.17%
		5) Main in work or on leave, no partner	10.18%	2.50%	6.22%	16.24%	11.86%
		6) Main not in work nor on leave, no partner	21.28%	4.12%	14.29%	30.48%	19.21%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	frequency	1) Both in work	6,011.99	234.38	5,551.18	6,472.81	6,115
		2) Main in work, partner not	398.12	29.12	340.87	455.37	426
		3) Partner in work, main not	1,924.64	97.55	1,732.84	2,116.44	1,973
		4) Both not in work	588.72	40.97	508.18	669.26	627
		5) Main in work or on leave, no partner	1,693.58	80.52	1,535.28	1,851.89	1,611
		6)Main not in work nor on leave, no partner	1,075.11	61.82	953.56	1,196.66	1,010
		9) Main in work, partner work status unknown	1.58	1.57	-1.50	4.66	1
		Total	11,693.76	426.27	10,855.68	12,531.84	11,763
	% of Total	1) Both in work	51.41%	0.87%	49.70%	53.12%	51.99%
		2) Main in work, partner not	3.40%	0.21%	3.02%	3.83%	3.62%
		3) Partner in work, main not	16.46%	0.55%	15.41%	17.56%	16.77%
		4) Both not in work	5.03%	0.29%	4.50%	5.63%	5.33%
		5) Main in work or on leave, no partner	14.48%	0.44%	13.64%	15.37%	13.70%
		6) Main not in work nor on leave, no partner	9.19%	0.41%	8.42%	10.03%	8.59%
		9) Main in work, partner work status unknown	0.01%	0.01%	0.00%	0.10%	0.01%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 4 & 6 versus all other codes. Pearson Chi Square (1, 389) = 62.088; p<.001; Cohen's d = 0.6281, CI (95%) 0.4634 to 0.7929

Appendix 1.34: Reasons for not actively seeking work

Due to the child's disability/health

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	83.28	12.53	58.65	107.92	78
		Yes	21.03	7.62	6.05	36.00	13
		Total	104.31	14.36	76.08	132.54	91
	% of Total	No	79.84%	6.42%	64.40%	89.66%	85.71%
		Yes	20.16%	6.42%	10.34%	35.60%	14.29%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	3,999.64	182.15	3,641.51	4,357.77	4,006
		Yes	58.62	9.53	39.89	77.36	53
		Total	4,058.26	183.78	3,696.93	4,419.59	4,059
	% of Total	No	98.56%	0.23%	98.02%	98.95%	98.69%
		Yes	1.44%	0.23%	1.05%	1.98%	1.31%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 189.189; p<.001; Cohen's d = 1.5694, CI (95%) = 1.2698 to 1.869

Due to concerns over losing benefits

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	95.93	13.48	69.42	122.44	84
		Yes	8.38	3.12	2.25	14.52	7
		Total	104.31	14.36	76.08	132.54	91
	% of Total	No	91.96%	2.77%	84.57%	95.98%	92.31%
		Yes	8.04%	2.77%	4.02%	15.43%	7.69%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	3,809.85	177.16	3,461.53	4,158.16	3,831
		Yes	248.41	21.19	206.76	290.07	228
		Total	4,058.26	183.78	3,696.93	4,419.59	4,059
	% of Total	No	93.88%	0.49%	92.83%	94.78%	94.38%
		Yes	6.12%	0.49%	5.22%	7.17%	5.62%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = .642; p=.429; Cohen's d = 0.1613, CI (95%) = -0.2344 to 0.5569

Due to concerns about finding suitable childcare

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	96.80	13.98	69.31	124.29	84
		Yes	7.51	2.99	1.63	13.39	7
		Total	104.31	14.36	76.08	132.54	91
	% of Total	No	92.80%	2.81%	84.93%	96.72%	92.31%
		Yes	7.20%	2.81%	3.28%	15.07%	7.69%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	3,878.01	178.64	3,526.80	4,229.23	3,895
		Yes	180.25	19.23	142.43	218.06	164
		Total	4,058.26	183.78	3,696.93	4,419.59	4,059
	% of Total	No	95.56%	0.45%	94.58%	96.37%	95.96%
		Yes	4.44%	0.45%	3.63%	5.42%	4.04%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 1.789; p=.233; Cohen's d = 0.2825, CI (95%) = -0.1351 to 0.7

Appendix 1.35: Main respondents who felt they were just about getting by or finding it difficult

Study child age 3 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Living comfortably	39.20	8.96	21.58	56.81	31
		2) Doing alright	62.55	8.98	44.90	80.20	71
		3) Just about getting by	64.46	10.68	43.45	85.46	53
		4) Finding it quite difficult	32.99	8.37	16.54	49.45	24
		5) Or, finding it very difficult	4.25	2.97	-1.58	10.09	2
		Total	203.45	19.87	164.38	242.51	181
	% of Total	1) Living comfortably	19.27%	3.97%	12.62%	28.28%	17.13%
		2) Doing alright	30.75%	3.93%	23.59%	38.96%	39.23%
		3) Just about getting by	31.68%	4.00%	24.39%	40.00%	29.28%
		4) Finding it quite difficult	16.22%	3.61%	10.29%	24.61%	13.26%
		5) Or, finding it very difficult	2.09%	1.43%	0.53%	7.81%	1.10%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Living comfortably	3,172.32	134.86	2,907.17	3,437.47	3,164
		2) Doing alright	4,653.44	189.14	4,281.57	5,025.30	4,820
		3) Just about getting by	3,247.59	133.25	2,985.61	3,509.57	3,178
		4) Finding it quite difficult	935.05	60.70	815.71	1,054.39	870
		5) Or, finding it very difficult	341.04	27.95	286.10	395.98	293
		Total	12,349.44	442.15	11,480.13	13,218.75	12,325
	% of Total	1) Living comfortably	25.69%	0.72%	24.30%	27.13%	25.67%
		2) Doing alright	37.68%	0.60%	36.50%	38.88%	39.11%
		3) Just about getting by	26.30%	0.57%	25.20%	27.43%	25.78%
		4) Finding it quite difficult	7.57%	0.37%	6.88%	8.33%	7.06%
		5) Or, finding it very difficult	2.76%	0.20%	2.39%	3.19%	2.38%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1 & 2 versus all other codes. Pearson Chi Square (1, 389) = 15.290; p=.003; Cohen's d = 0.3019; CI (95%) = 0.1491 to 0.4548. Not significant after Holm-Bonferroni correction was applied.

Study child age 7 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) living comfortably,	28.08	6.02	16.241	39.925	26
		2) doing alright,	88.52	11.93	65.074	111.966	85
		3) just about getting by,	86.41	13.15	60.550	112.266	75
		4) finding it quite difficult,	18.24	5.49	7.449	29.033	15
		5) finding it very difficult?	11.45	5.32	.985	21.917	8
		Total	232.70	22.19	189.068	276.338	209
	% of Total	1) living comfortably,	12.07%	2.50%	7.95%	17.90%	12.44%
		2) doing alright,	38.04%	3.99%	30.56%	46.13%	40.67%
		3) just about getting by,	37.13%	4.14%	29.42%	45.56%	35.89%
		4) finding it quite difficult,	7.84%	2.19%	4.47%	13.38%	7.18%
		5) finding it very difficult?	4.92%	2.17%	2.04%	11.42%	3.83%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) living comfortably,	2,920.63	133.35	2,658.46	3,182.80	2,923
		2) doing alright,	4,764.93	176.81	4,417.30	5,112.55	4,896
		3) just about getting by,	4,014.20	159.83	3,699.96	4,328.43	3,969
		4) finding it quite difficult,	1,279.87	70.33	1,141.59	1,418.15	1,259
		5) finding it very difficult?	521.81	35.56	451.89	591.73	482
		Total	13,501.43	486.21	12,545.51	14,457.35	13,529
	% of Total	1) living comfortably,	21.63%	0.62%	20.43%	22.89%	21.61%
		2) doing alright,	35.29%	0.51%	34.29%	36.30%	36.19%
		3) just about getting by,	29.73%	0.52%	28.72%	30.76%	29.34%
		4) finding it quite difficult,	9.48%	0.34%	8.84%	10.17%	9.31%
		5) finding it very difficult?	3.86%	0.21%	3.48%	4.29%	3.56%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1 & 2 versus all other codes. Pearson Chi Square (1, 389) = 4.333; p=.119; Cohen's d=0.1513; CI (95%) = 0.0084 to 0.2942

Study child age 11 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) ... living comfortably,	31.06	6.37	18.53	43.59	25
		2) doing alright,	60.33	10.22	40.24	80.42	58
		3) just about getting by,	66.77	10.57	45.98	87.55	64
		4) finding it quite difficult,	25.73	6.16	13.62	37.84	23
		5) or, finding it very difficult?	13.44	5.88	1.87	25.00	7
		Total	197.32	19.64	158.72	235.93	177
	% of Total	1) ... living comfortably,	15.74%	3.21%	10.40%	23.12%	14.12%
		2) doing alright,	30.57%	4.15%	23.07%	39.27%	32.77%
		3) just about getting by,	33.84%	4.06%	26.37%	42.21%	36.16%
		4) finding it quite difficult,	13.04%	2.81%	8.44%	19.61%	12.99%
		5) or, finding it very difficult?	6.81%	2.79%	2.99%	14.78%	3.95%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) ... living comfortably,	2,263.22	105.35	2,056.10	2,470.34	2,267
		2) doing alright,	3,965.95	168.29	3,635.08	4,296.83	3,996
		3) just about getting by,	3,623.13	150.49	3,327.26	3,919.00	3,691
		4) finding it quite difficult,	1,235.16	61.04	1,115.14	1,355.17	1,230
		5) or, finding it very difficult?	506.71	36.22	435.51	577.91	472
		Total	11,594.16	422.17	10,764.13	12,424.19	11,656
	% of Total	1) ... living comfortably,	19.52%	0.65%	18.27%	20.83%	19.45%
		2) doing alright,	34.21%	0.59%	33.05%	35.38%	34.28%
		3) just about getting by,	31.25%	0.61%	30.06%	32.46%	31.67%
		4) finding it quite difficult,	10.65%	0.38%	9.93%	11.43%	10.55%
		5) or, finding it very difficult?	4.37%	0.26%	3.88%	4.92%	4.05%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1 & 2 versus all other codes. Pearson Chi Square (1, 389) = 4.299; p=.118; Cohen's d=0.1637; CI (95%) = 0.0081 to 0.3193

Appendix 1.36: Proportion of families who said they were not behind with their bills

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	Behind on at least one bill	52.12	9.89	32.68	71.55	42
		Not behind on any bills	180.59	18.75	143.72	217.45	167
		Total	232.70	22.19	189.07	276.34	209
	% of Total	Behind on at least one bill	22.40%	3.57%	16.16%	30.17%	20.10%
		Not behind on any bills	77.60%	3.57%	69.83%	83.84%	79.90%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Behind on at least one bill	2,146.70	116.58	1,917.50	2,375.89	1,965
		Not behind on any bills	11,298.26	400.53	10,510.79	12,085.74	11,508
		Total	13,444.96	483.35	12,494.66	14,395.27	13,473
	% of Total	Behind on at least one bill	15.97%	0.56%	14.89%	17.10%	14.58%
		Not behind on any bills	84.03%	0.56%	82.90%	85.11%	85.42%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 7.013; p=.040; Cohen's d=0.2305; CI (95%) = -0.0587 to 0.4023. Not significant when HolmBonferroni correction is applied.

Appendix 1.37: Mental health of the natural mother: child ages 9 months, 3 years, 5 years, 7 years and 11 years

	Kessler K6 Scale	Weighted Estimate (Mean)	Standard Error	95% Confidence Interval		Unweighted Count (N)
				Lower	Upper	
autism/asperger's	Child age 3 years	4.66	0.40	3.88	5.44	119
	Child age 5 years	5.10	0.47	4.19	6.02	131
	Child age 7 years	5.29	0.41	4.48	6.10	127
	Child age 11 years	6.14	0.49	5.19	7.10	133
without autism/asperger's	Child age 3 years	3.14	0.05	3.04	3.24	8,677
	Child age 5 years	3.04	0.05	2.94	3.14	9,210
	Child age 7 years	3.00	0.05	2.90	3.10	9,271
	Child age 11 years	3.87	0.07	3.74	4.00	8,958

Child age 3 years: Weighted count autism/aspergers = 131.561 weighted count without autism/aspergers = 8,689.235; Wald F (1, 389) = 14.632, p<.001; Cohen's d=0.336; CI (95%) = 0.1638 to 0.5085.
Child age 5 years: Weighted count autism/aspergers = 141.589 weighted count without autism/aspergers = 9,194.872; Wald F (1, 389) = 19.784, p<.001; Cohen's d=0.3767, CI (95%) = 0.2106 to 0.5427.
Child age 7 years: Weighted count autism/aspergers = 138.221 weighted count without autism/aspergers = 9,239.010; Wald F (1, 389) = 31.265, p<.001; Cohen's d=0.4791; CI (95%) = 0.3111 to 0.6472.
Child age 11 years: Weighted count autism/aspergers = 145.236 weighted count without autism/aspergers = 8,913.346; Wald F (1, 389) = 22.802, p<.001; Cohen's d=0.3994; CI (95%) = 0.2354 to 0.5635.

Appendix 1.38: Life satisfaction of the natural mother: child ages 9 months, 3 years, 5 years, 7 years and 11 years

	Life Satisfaction	Weighted Estimate (Mean)	Standard Error	95% Confidence Interval		Unweighted Count (N)
				Lower	Upper	
autism/ asperger's	Child age 9 months	7.70	0.16	7.38	8.01	135
	Child age 3 years	7.45	0.22	7.02	7.88	119
	Child age 5 years	6.93	0.22	6.50	7.36	131
	Child age 7 years	6.72	0.23	6.27	7.17	125
	Child age 11 years	7.02	0.21	6.61	7.43	134
Without autism/ asperger's	Child age 9 months	7.81	0.02	7.76	7.86	9,335
	Child age 3 years	7.90	0.02	7.85	7.95	8,634
	Child age 5 years	7.54	0.03	7.49	7.59	9,128
	Child age 7 years	7.52	0.02	7.48	7.57	9,187
	Child age 11 years	7.54	0.03	7.49	7.59	9,038

Child age 9 months: Weighted count autism/aspergers = 147.592 weighted count without autism/aspergers = 9,272.380; Wald F (1, 389) = 0.502, p=.479; Cohen's d=0.0588; CI (95%) -0.1038 to 0.2214.
Child age 3 years: Weighted count autism/aspergers = 131.561 weighted count without autism/aspergers = 8,660.782; Wald F (1, 389) = 4.220, p=.041; Cohen's d=0.1805; CI (95%) 0.0083 to 0.3526. Not significant after Holm-Bonferroni correction was applied.
Child age 5 years: Weighted count autism/aspergers = 141.589 weighted count without autism/aspergers = 9,105.923; Wald F (1, 389) = 7.821, p=.005; Cohen's d=0.2368; CI (95%) 0.0708 to 0.4029. Not significant after Holm-Bonferroni correction was applied.
Child age 7 years: Weighted count autism/aspergers = 136.063 weighted count without autism/aspergers = 9,156.759; Wald F (1, 389) = 12.195, p=.001; Cohen's d=0.3016; CI (95%) 0.1323 to 0.4709.
Child age 11 years: Weighted count autism/aspergers = 147.126 weighted count without autism/aspergers = 9,002.022; Wald F (1, 389) = 6.058, p=.014; Cohen's d=0.2046; CI (95%) 0.0416 to 0.3675. Not significant after Holm-Bonferroni correction was applied.

Appendix 1.39: Problems with the child's health and development at birth or within the first week

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	141.41	16.46	109.05	173.76	129
		Yes	72.70	10.81	51.44	93.96	70
		Total	214.11	20.77	173.27	254.94	199
	% of Total	No	66.04%	3.97%	57.86%	73.38%	64.82%
		Yes	33.96%	3.97%	26.62%	42.14%	35.18%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	9,726.38	369.62	8,999.68	10,453.07	9,878
		Yes	3,178.75	128.54	2,926.03	3,431.47	3,166
		Total	12,905.13	465.31	11,990.29	13,819.97	13,044
	% of Total	No	75.37%	0.60%	74.18%	76.52%	75.73%
		Yes	24.63%	0.60%	23.48%	25.82%	24.27%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 9.914; p=.012; Cohen's d=-0.2498; CI(95%)= 0.0923 to 0.4073. Not significant after Holm-Bonferroni correction was applied.

Appendix 1.40: Problems with the child's health and development at nine months

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Count
					Lower	Upper	
autism/ asperger's	Frequency	No	179.13	17.95	143.84	214.41	169
		Yes	34.98	8.13	19.00	50.95	30
		Total	214.11	20.77	173.27	254.94	199
	% of Total	No	83.66%	3.27%	76.20%	89.12%	84.92%
		Yes	16.34%	3.27%	10.88%	23.80%	15.08%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	11,862.99	418.24	11,040.68	12,685.29	12,007
		Yes	1,073.13	69.09	937.29	1,208.96	1,052
		Total	12,936.11	465.89	12,020.13	13,852.09	13,059
	% of Total	No	91.70%	0.38%	90.93%	92.42%	91.94%
		Yes	8.30%	0.38%	7.58%	9.07%	8.06%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 17.796; p=.002; Cohen's d= 0.4243, CI(95%) = 0.2216 to 0.627

Appendix 1.41: Problems with the child's health and development at 3 years

Speech and language difficulty

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	Yes	108.48	14.36	80.25	136.72	101
		No	94.96	12.60	70.19	119.73	80
		Total	203.45	19.87	164.38	242.51	181
	% of Total	Yes	53.32%	4.47%	44.53%	61.92%	55.80%
		No	46.68%	4.47%	38.08%	55.47%	44.20%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Yes	1646.56	85.08	1479.29	1813.83	1,549
		No	10695.11	378.12	9951.69	11438.52	10,770
		Total	12341.67	441.61	11473.42	13209.92	12,319
	% of Total	Yes	13.34%	0.43%	12.52%	14.21%	12.57%
		No	86.66%	0.43%	85.79%	87.48%	87.43%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 264.929; p<.001; Cohen's d=1.105; CI(95%) = 0.9504 to 1.2595

Epilepsy

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	201.06	19.86	162.01	240.11	179
		Yes	2.39	2.02	-1.58	6.35	2
		Total	203.45	19.87	164.38	242.51	181
	% of Total	No	98.83%	0.99%	94.00%	99.78%	98.90%
		Yes	1.17%	0.99%	0.22%	6.00%	1.10%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	12,288.99	439.59	11,424.73	13,153.25	12,268
		Yes	51.30	8.72	34.16	68.44	50
		Total	12,340.29	441.65	11,471.97	13,208.62	12,318
	% of Total	No	99.58%	0.07%	99.43%	99.70%	99.59%
		Yes	0.42%	0.07%	0.30%	0.57%	0.41%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Confidence intervals overlapped indicating no significant difference. Chi square not conducted due to small 'expected' values. Fisher's test could not be used due to survey structure.

Difficulty walking on level ground

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Population Size	No	196.51	19.22	158.72	234.29	175
		Yes	6.94	3.21	0.63	13.25	6
		Total	203.45	19.87	164.38	242.51	181
	% of Total	No	96.59%	1.52%	91.97%	98.59%	96.69%
		Yes	3.41%	1.52%	1.41%	8.03%	3.31%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Population Size	No	12,299.90	438.74	11,437.30	13,162.50	12,274
		Yes	41.77	8.28	25.50	58.05	45
		Total	12,341.67	441.61	11,473.42	13,209.92	12,319
	% of Total	No	99.66%	0.06%	99.51%	99.77%	99.63%
		Yes	0.34%	0.06%	0.23%	0.49%	0.37%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Confidence intervals did not overlap thus indicating a significant difference. Chi square not conducted due to small 'expected' values. Fisher's test could not be used due to survey structure.

Asthma

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism /asperger's	Frequency	Yes	45.54	9.32	27.21	63.86	39
		No	152.94	16.51	120.48	185.41	138
		Total	198.48	19.46	160.21	236.75	177
	% of Total	Yes	22.94%	3.98%	16.05%	31.68%	22.03%
		No	77.06%	3.98%	68.32%	83.95%	77.97%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Yes	1,532.51	79.40	1,376.39	1,688.62	1,506
		No	10,611.00	375.02	9,873.69	11,348.31	10,620
		Total	12,143.51	431.67	11,294.80	12,992.21	12,126
	% of Total	Yes	12.62%	0.43%	11.80%	13.49%	12.42%
		No	87.38%	0.43%	86.51%	88.20%	87.58%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 18.604; p=.001; Cohen's d=0.3989, CI(95%) = 0.2141 to 0.5837

Hearing difficulty

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism /asperger's	Frequency	Yes	34.62	6.94	20.97	48.26	26
		No	159.99	17.22	126.12	193.85	148
		Total	194.60	19.21	156.84	232.36	174
	% of Total	Yes	17.79%	3.19%	12.36%	24.93%	14.94%
		No	82.21%	3.19%	75.07%	87.64%	85.06%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Yes	571.29	38.21	496.18	646.41	543
		No	11,691.17	419.94	10,865.54	12,516.81	11,707
		Total	12,262.46	439.47	11,398.43	13,126.50	12,250
	% of Total	Yes	4.66%	0.26%	4.17%	5.20%	4.43%
		No	95.34%	0.26%	94.80%	95.83%	95.57%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 71.175; p<.001; Cohen's d=0.8204, CI(95%) = 0.6126 to 1.0282

Eyesight problems

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism /asperger's	Population Size	Yes	25.67	6.44	13.00	38.34	25
		No	175.18	17.26	141.24	209.13	154
		Total	200.86	19.32	162.86	238.85	179
	% of Total	Yes	12.78%	2.85%	8.15%	19.49%	13.97%
		No	87.22%	2.85%	80.51%	91.85%	86.03%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Population Size	Yes	784.58	47.11	691.96	877.20	790
		No	11,495.89	411.47	10,686.91	12,304.88	11,477
		Total	12,280.47	439.89	11,415.62	13,145.33	12,267
	% of Total	Yes	6.39%	0.30%	5.83%	7.00%	6.44%
		No	93.61%	0.30%	93.00%	94.17%	93.56%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 13.266; p=.002; Cohen's d = 0.4213, CI(95%) = 0.1894 to 0.6531

Eczema/hayfever

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism /asperger's	Population Size	Yes	82.447	11.396	60.042	104.852	77
		No	118.924	13.797	91.798	146.050	103
		Total	201.371	19.505	163.023	239.719	180
	% of Total	Yes	40.94%	3.93%	33.49%	48.83%	42.78%
		No	59.06%	3.93%	51.17%	66.51%	57.22%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Population Size	Yes	4562.760	185.391	4198.266	4927.254	4426
		No	7658.531	274.264	7119.306	8197.756	7790
		Total	12221.291	435.388	11365.282	13077.300	12216
	% of Total	Yes	37.33%	0.59%	36.17%	38.51%	36.23%
		No	62.67%	0.59%	61.49%	63.83%	63.77%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 1.089; p=.349; Cohen's d = 0.0836, CI (95%) = -0.0726 to 0.2397

Appendix 1.42: Problems with the child's health and development at 5 years

ADHD

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	Yes	35.01	7.92	19.43	50.59	30
		No	186.86	20.16	147.22	226.50	169
		Total	221.87	21.63	179.35	264.38	199
	% of Total	Yes	15.78%	3.34%	10.26%	23.49%	15.08%
		No	84.22%	3.34%	76.51%	89.74%	84.92%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Yes	86.91	12.76	61.82	112.00	78
		No	12,780.93	452.74	11,890.80	13,671.05	12,810
		Total	12,867.84	456.05	11,971.20	13,764.48	12,888
	% of Total	Yes	0.68%	0.10%	0.51%	0.89%	0.61%
		No	99.32%	0.10%	99.11%	99.49%	99.39%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Confidence intervals did not overlap indicating a significant difference. Chi square not conducted due to small 'expected' values. Fishers's test could not be used due to survey structure.

Bed wetting

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	No	106.99	13.82	79.83	134.16	94
		Yes	86.88	12.03	63.24	110.53	85
		Total	193.88	19.35	155.83	231.92	179
	% of Total	No	55.19%	4.40%	46.47%	63.60%	52.51%
		Yes	44.81%	4.40%	36.40%	53.53%	47.49%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	No	9,565.30	342.84	8,891.24	10,239.36	9,690
		Yes	3,268.44	133.76	3,005.45	3,531.43	3,160
		Total	12,833.74	455.38	11,938.42	13,729.06	12,850
	% of Total	No	74.53%	0.49%	73.56%	75.48%	75.41%
		Yes	25.47%	0.49%	24.52%	26.44%	24.59%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 37.389; p<.001; Cohen's d=0.4773; CI(95%) = 0.3197 to 0.6348

Appendix 1.43. Happiness scores: child age 11 years

	Happiness	Weighted Estimate (Mean)	Standard Error	95% Confidence Interval		Unweighted Count (N)
				Lower	Upper	
autism/ asperger's	Child age 11 years	27.68	.53	26.64	28.71	147
without autism/asperger's	Child age 11 years	29.49	.09	29.31	29.66	11,281

Child age 11 years: Weighted count autism/aspergers = 166.083 weighted count without autism/aspergers = 11194.247; Wald F (1, 389) = 11.456, p=.001; Cohen's d=0.2646; CI (95%) 0.1113 to 0.4178. Cronbachs Alpha for children with autism/asperger's = .757 Cronbachs Alpha for children without autism/asperger's = .838.

Appendix 1.44. Self esteem scores: child age 11 years

	Self esteem	Weighted Estimate (Mean)	Standard Error	95% Confidence Interval		Unweighted Count (N)
				Lower	Upper	
autism/ asperger's	Child age 11 years	9.41	.20	9.02	9.80	134
without autism/asperger's	Child age 11 years	9.54	.03	9.49	9.59	10,868

Child age 11 years: Weighted count autism/aspergers = 147.886 weighted count without autism/aspergers = 10795.521; Wald F (1, 389) = 0.441, p=.507; Cohen's d=0.055; CI (95%) 0.1073 to 0.2173. Cronbachs Alpha for children with autism/asperger's = .711 Cronbachs Alpha for children without autism/asperger's = .736.

Appendix 1.45: Total difficulties scores: child ages 3 to 11 years

	SDQ Total Difficulties	Weighted Estimate (Mean)	Standard Error	95% Confidence Interval		Unweighted Count (N)
				Lower	Upper	
autism/ asperger's	Child age 3 years	15.09	0.66	13.78	16.39	170
	Child age 5 years	15.59	0.62	14.36	16.81	190
	Child age 7 years	18.24	0.60	17.06	19.42	201
	Child age 11 years	17.39	0.62	16.16	18.61	175
without autism/ asperger's	Child age 3 years	9.59	0.08	9.42	9.75	11,549
	Child age 5 years	7.27	0.08	7.12	7.42	12,472
	Child age 7 years	7.49	0.08	7.34	7.64	13,142
	Child age 11 years	7.62	0.09	7.45	7.79	11,384

Child age 3 years: Weighted count autism/aspergers = 188.948 weighted count without autism/aspergers = 11664.256; Wald F (1, 389) = 70.522, p<.001; Cohen's d=0.6159; CI(95%) = 0.4719 to 0.7598.
Child age 5 years: Weighted count autism/aspergers = 212.639 weighted count without autism/aspergers = 12519.046; Wald F (1, 389) = 181.976, p<.001; Cohen's d=0.9329; CI(95%) = 0.7969 to 1.0689.
Child age 7 years: Weighted count autism/aspergers = 222.073 weighted count without autism/aspergers = 13165.643; Wald F (1, 389) = 325.586, p= p<.001; Cohen's d=1.221; CI(95%) = 1.0876 to 1.3544.
Child age 11 years: Weighted count autism/aspergers = 195.473 weighted count without autism/aspergers = 11353.624; Wald F (1, 389) = 243.318, p= p<.001; Cohen's d=1.12; CI(95%) = 0.9843 to 1.2689.

Appendix 1.46: Enjoyment of and reluctance to go to school: ages 5, 7 and 11 years

Reluctant to go to school at 5 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Every day	16.70	4.77	7.32	26.08	13
		2) Several times a week	16.05	5.14	5.95	26.14	12
		3) Once or twice a week	25.27	6.01	13.45	37.09	24
		4) Once or twice a month	22.88	6.08	10.94	34.83	23
		5) Less often	41.74	8.87	24.30	59.19	37
		6) Not at all	83.89	12.32	59.68	108.11	79
		Total	206.53	20.40	166.42	246.64	188
	% of Total	1) Every day	8.09%	2.12%	4.78%	13.37%	6.91%
		2) Several times a week	7.77%	2.39%	4.19%	13.95%	6.38%
		3) Once or twice a week	12.23%	2.71%	7.82%	18.63%	12.77%
		4) Once or twice a month	11.08%	2.71%	6.77%	17.62%	12.23%
		5) Less often	20.21%	3.72%	13.86%	28.51%	19.68%
		6) Not at all	40.62%	4.53%	32.10%	49.74%	42.02%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Every day	164.25	15.04	134.69	193.82	173
		2) Several times a week	255.54	21.95	212.40	298.69	249
		3) Once or twice a week	904.01	49.83	806.05	1,001.98	854
		4) Once or twice a month	1,490.92	71.88	1,349.59	1,632.25	1,471
		5) Less often	2,858.62	125.83	2,611.23	3,106.01	2,833
		6) Not at all	7,080.93	253.13	6,583.26	7,578.61	7,171
		Total	12,754.28	452.92	11,863.80	13,644.76	12,751
	% of Total	1) Every day	1.29%	0.11%	1.09%	1.52%	1.36%
		2) Several times a week	2.00%	0.15%	1.72%	2.33%	1.95%
		3) Once or twice a week	7.09%	0.28%	6.55%	7.67%	6.70%
		4) Once or twice a month	11.69%	0.35%	11.02%	12.39%	11.54%
		5) Less often	22.41%	0.51%	21.43%	23.43%	22.22%
		6) Not at all	55.52%	0.67%	54.19%	56.84%	56.24%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Code 6 versus all other codes. Pearson Chi Square (1, 389) = 18.221; p=.002; Cohen's d=0.3316; CI(95%) = 0.1773 to 0.4859.

Reluctant to go to school at 7 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Every day	16.24	4.86	6.69	25.80	12
		2) Several times a week	27.39	6.69	14.24	40.53	24
		3) Once or twice a week	25.75	5.45	15.03	36.48	31
		4) Once or twice a month	38.94	8.07	23.07	54.81	33
		5) Less often	46.26	10.50	25.61	66.91	35
		6) Not at all	75.00	10.88	53.61	96.38	72
		Total	229.58	22.12	186.10	273.06	207
	% of Total	1) Every day	7.08%	2.04%	3.98%	12.28%	5.80%
		2) Several times a week	11.93%	2.52%	7.79%	17.84%	11.59%
		3) Once or twice a week	11.22%	2.24%	7.51%	16.43%	14.98%
		4) Once or twice a month	16.96%	3.10%	11.69%	23.96%	15.94%
		5) Less often	20.15%	3.85%	13.61%	28.78%	16.91%
		6) Not at all	32.67%	4.05%	25.24%	41.07%	34.78%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Every day	184.35	18.47	148.03	220.67	176
		2) Several times a week	311.95	25.62	261.58	362.32	316
		3) Once or twice a week	744.78	41.36	663.46	826.10	714
		4) Once or twice a month	1,532.49	72.43	1,390.09	1,674.90	1,476
		5) Less often	3,481.73	144.37	3,197.88	3,765.57	3,383
		6) Not at all	7,242.87	260.52	6,730.66	7,755.08	7,462
		Total	13,498.17	484.70	12,545.21	14,451.13	13,527
	% of Total	1) Every day	1.37%	0.12%	1.14%	1.63%	1.30%
		2) Several times a week	2.31%	0.16%	2.02%	2.65%	2.34%
		3) Once or twice a week	5.52%	0.24%	5.06%	6.01%	5.28%
		4) Once or twice a month	11.35%	0.34%	10.70%	12.04%	10.91%
		5) Less often	25.79%	0.43%	24.96%	26.64%	25.01%
		6) Not at all	53.66%	0.58%	52.52%	54.80%	55.16%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Code 6 versus all other codes. Pearson Chi Square (1, 389) = 39.980; p<.001; Cohen's d=0.4796; CI(95%) = 0.3264 to 0.6328

Enjoyment of school at 5 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Always	105.86	13.06	80.19	131.53	105
		2) Usually	64.63	10.46	44.06	85.20	54
		3) Sometimes	30.73	7.90	15.21	46.26	24
		4) Not at all	5.31	2.40	0.58	10.04	5
		Total	206.53	20.40	166.42	246.64	188
	% of Total	1) Always	51.26%	3.91%	43.59%	58.86%	55.85%
		2) Usually	31.29%	4.12%	23.80%	39.90%	28.72%
		3) Sometimes	14.88%	3.44%	9.30%	22.96%	12.77%
		4) Not at all	2.57%	1.13%	1.07%	6.03%	2.66%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Always	9,269.57	329.61	8,621.53	9,917.61	9,409
		2) Usually	2,990.22	129.32	2,735.98	3,244.47	2,849
		3) Sometimes	442.81	29.85	384.13	501.50	430
		4) Not at all	53.80	7.76	38.53	69.06	65
		Total	12,756.40	452.86	11,866.04	13,646.76	12,753
	% of Total	1) Always	72.67%	0.53%	71.62%	73.69%	73.78%
		2) Usually	23.44%	0.50%	22.48%	24.43%	22.34%
		3) Sometimes	3.47%	0.20%	3.10%	3.89%	3.37%
		4) Not at all	0.42%	0.06%	0.32%	0.56%	0.51%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1 & 2 versus codes 3 & 4. Pearson Chi Square (1, 389) = 94.669; p<.001; d=0.911; 0.7068 to 1.1152

Enjoyment of school at 7 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Always	91.52	12.26	67.41	115.62	90
		2) Usually	77.77	12.31	53.58	101.97	65
		3) Sometimes	43.31	8.04	27.51	59.11	37
		4) Not at all	16.98	4.74	7.65	26.31	15
		Total	229.58	22.12	186.10	273.06	207
	% of Total	1) Always	39.86%	4.25%	31.88%	48.43%	43.48%
		2) Usually	33.88%	3.85%	26.75%	41.81%	31.40%
		3) Sometimes	18.86%	2.91%	13.79%	25.26%	17.87%
		4) Not at all	7.40%	1.97%	4.35%	12.31%	7.25%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Always	8,610.80	315.15	7,991.19	9,230.42	8,877
		2) Usually	4,000.82	157.95	3,690.27	4,311.36	3,798
		3) Sometimes	772.41	43.71	686.47	858.35	744
		4) Not at all	113.15	13.82	85.98	140.32	109
		Total	13,497.18	484.78	12,544.06	14,450.29	13,528
	% of Total	1) Always	63.80%	0.52%	62.77%	64.81%	65.62%
		2) Usually	29.64%	0.45%	28.76%	30.54%	28.08%
		3) Sometimes	5.72%	0.25%	5.24%	6.24%	5.50%
		4) Not at all	0.84%	0.10%	0.67%	1.05%	0.81%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1 & 2 versus codes 3 & 4. Pearson Chi Square (1, 389) = 136.626; p<.001; d=0.8952; 0.7288 to 1.0615

Enjoyment of school at 11 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Always	66.13	9.08	48.28	83.98	66
		2) Usually	76.21	11.62	53.37	99.06	63
		3) Sometimes	42.85	8.03	27.07	58.64	39
		4) Never	11.67	4.28	3.25	20.08	8
		Total	196.86	19.63	158.26	235.46	176
	% of Total	1) Always	33.59%	3.81%	26.56%	41.44%	37.50%
		2) Usually	38.71%	4.18%	30.88%	47.18%	35.80%
		3) Sometimes	21.77%	3.33%	15.93%	29.01%	22.16%
		4) Never	5.93%	2.05%	2.97%	11.48%	4.55%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Always	6,055.24	242.97	5,577.55	6,532.93	6,264
		2) Usually	4,655.24	184.35	4,292.78	5,017.69	4,554
		3) Sometimes	833.23	42.88	748.92	917.54	808
		4) Never	95.34	11.99	71.77	118.92	88
		Total	11,639.05	424.13	10,805.18	12,472.92	11,714
	% of Total	1) Always	52.03%	0.72%	50.61%	53.44%	53.47%
		2) Usually	40.00%	0.68%	38.66%	41.35%	38.88%
		3) Sometimes	7.16%	0.30%	6.59%	7.77%	6.90%
		4) Never	0.82%	0.10%	0.65%	1.03%	0.75%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1 & 2 versus codes 3 & 4. Pearson Chi Square (1, 389) = 99.252; p<.001; d=0.8191; 0.643 to 0.9951

Appendix 1.47: Temporary exclusions and suspensions: age 11 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	Yes	9.11	3.64	1.95	16.26	10
		No	187.76	19.35	149.71	225.80	166
		Total	196.86	19.63	158.26	235.46	176
	% of Total	Yes	4.63%	1.83%	2.10%	9.87%	5.68%
		No	95.37%	1.83%	90.13%	97.90%	94.32%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Yes	172.20	20.17	132.55	211.85	157
		No	11,475.02	417.50	10,654.19	12,295.86	11,562
		Total	11,647.23	424.34	10,812.93	12,481.52	11,719
	% of Total	Yes	1.48%	0.16%	1.19%	1.83%	1.34%
		No	98.52%	0.16%	98.17%	98.81%	98.66%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Confidence intervals did not overlap indicating a significant difference. Chi square not conducted due to small 'expected' values. Fishers's test could not be used due to survey structure.

Appendix 1.48: Permanent exclusions: age 11 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	Yes	1.16	0.91	-0.64	2.95	2
		No	195.71	19.56	157.25	234.16	174
		Total	196.86	19.63	158.26	235.46	176
	% of Total	Yes	0.59%	0.46%	0.12%	2.71%	1.14%
		No	99.41%	0.46%	97.29%	99.88%	98.86%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Yes	15.79	4.79	6.38	25.20	14
		No	11,631.44	424.30	10,797.23	12,465.64	11,705
		Total	11,647.23	424.34	10,812.93	12,481.52	11,719
	% of Total	Yes	0.14%	0.04%	0.07%	0.25%	0.12%
		No	99.86%	0.04%	99.75%	99.93%	99.88%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Confidence intervals overlapped indicating no significant difference. Chi square not conducted due to small 'expected' values. Fisher's test could not be used due to survey structure.

Appendix 1.49: Bullied several or many times at school at age 7 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Never	116.90	13.70	89.97	143.83	109
		2) Once or twice	59.94	11.40	37.52	82.36	50
		3) Several times	33.91	7.71	18.74	49.07	31
		4) Many times	9.90	3.77	2.49	17.30	9
		Total	220.64	21.28	178.81	262.48	199
	% of Total	1) Never	52.98%	4.47%	44.18%	61.60%	54.77%
		2) Once or twice	27.17%	4.16%	19.79%	36.05%	25.13%
		3) Several times	15.37%	3.10%	10.20%	22.50%	15.58%
		4) Many times	4.49%	1.62%	2.19%	8.98%	4.52%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Never	8,926.18	336.06	8,265.46	9,586.91	9,100
		2) Once or twice	3,661.03	147.04	3,371.94	3,950.12	3,531
		3) Several times	675.37	39.87	596.99	753.75	666
		4) Many times	218.59	18.72	181.78	255.39	211
		Total	13,481.17	484.25	12,529.10	14,433.24	13,508
	% of Total	1) Never	66.21%	0.59%	65.04%	67.36%	67.37%
		2) Once or twice	27.16%	0.53%	26.13%	28.20%	26.14%
		3) Several times	5.01%	0.24%	4.55%	5.51%	4.93%
		4) Many times	1.62%	0.13%	1.38%	1.90%	1.56%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1 & 2 versus codes 3 & 4; Pearson Chi Square (1, 389) = 59.550; p<.001; d=0.6888; 0.5026 to 0.8749

Appendix 1.50: Spends time with friends outside school at child ages 5, 7 and 11 years

Study child age 5 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Every day or almost every day	15.52	4.25	7.16	23.88	18
		2) Several times a week	24.59	6.57	11.68	37.50	22
		3) Once or twice a week	61.52	12.48	36.98	86.05	43
		4) Once or twice a month	29.00	6.12	16.96	41.04	27
		5) Less often	22.02	5.06	12.08	31.96	23
		6) Not at all	69.22	11.41	46.78	91.66	66
		Total	221.87	21.63	179.35	264.38	199
	% of Total	1) Every day or almost every day	6.99%	1.79%	4.19%	11.45%	9.05%
		2) Several times a week	11.09%	2.71%	6.77%	17.64%	11.06%
		3) Once or twice a week	27.73%	4.75%	19.40%	37.94%	21.61%
		4) Once or twice a month	13.07%	2.61%	8.73%	19.11%	13.57%
		5) Less often	9.92%	2.18%	6.39%	15.11%	11.56%
		6) Not at all	31.20%	4.04%	23.86%	39.63%	33.17%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Every day or almost every day	1,607.61	83.73	1,442.99	1,772.23	1,871
		2) Several times a week	2,041.98	94.74	1,855.71	2,228.25	2,053
		3) Once or twice a week	4,238.40	164.43	3,915.12	4,561.67	4,043
		4) Once or twice a month	2,337.50	92.20	2,156.23	2,518.76	2,195
		5) Less often	1,206.51	62.19	1,084.25	1,328.78	1,250
		6) Not at all	1,446.05	100.47	1,248.53	1,643.57	1,486
		Total	12,878.05	456.61	11,980.30	13,775.79	12,898
	% of Total	1) Every day or almost every day	12.48%	0.52%	11.50%	13.54%	14.51%
		2) Several times a week	15.86%	0.45%	15.00%	16.75%	15.92%
		3) Once or twice a week	32.91%	0.62%	31.70%	34.15%	31.35%
		4) Once or twice a month	18.15%	0.48%	17.23%	19.11%	17.02%
		5) Less often	9.37%	0.33%	8.73%	10.05%	9.69%
		6) Not at all	11.23%	0.57%	10.16%	12.39%	11.52%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Code 6 versus all other codes. Pearson Chi Square (1, 389) = 85.016; p<.001; Cohens' d = 0.7039, CI(95%) = 0.5444 to 0.8634.

Study child age 7 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Every day or almost every day	34.70	7.08	20.78	48.62	33
		2) Several times a week	26.87	5.91	15.26	38.49	28
		3) Once or twice a week	60.51	10.28	40.31	80.72	55
		4) Once or twice a month	21.38	4.77	12.00	30.76	22
		5) Less often than once a month	21.56	5.97	9.82	33.30	16
		6) Not at all	67.68	12.23	43.63	91.72	55
		Total	232.70	22.19	189.07	276.34	209
	% of Total	1) Every day or almost every day	14.91%	2.76%	10.25%	21.20%	15.79%
		2) Several times a week	11.55%	2.31%	7.72%	16.92%	13.40%
		3) Once or twice a week	26.00%	3.79%	19.27%	34.10%	26.32%
		4) Once or twice a month	9.19%	2.01%	5.93%	13.97%	10.53%
		5) Less often than once a month	9.27%	2.46%	5.43%	15.37%	7.66%
		6) Not at all	29.08%	3.88%	22.07%	37.26%	26.32%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Every day or almost every day	2,883.02	133.06	2,621.42	3,144.62	3,132
		2) Several times a week	2,880.67	120.69	2,643.39	3,117.95	2,879
		3) Once or twice a week	4,416.06	174.05	4,073.86	4,758.25	4,239
		4) Once or twice a month	1,828.57	80.28	1,670.74	1,986.40	1,693
		5) Less often than once a month	669.84	45.45	580.48	759.19	683
		6) Not at all	843.08	75.84	693.98	992.18	922
		Total	13,521.23	485.99	12,565.73	14,476.73	13,548
	% of Total	1) Every day or almost every day	21.32%	0.69%	20.00%	22.71%	23.12%
		2) Several times a week	21.30%	0.45%	20.44%	22.20%	21.25%
		3) Once or twice a week	32.66%	0.65%	31.40%	33.94%	31.29%
		4) Once or twice a month	13.52%	0.39%	12.77%	14.31%	12.50%
		5) Less often than once a month	4.95%	0.26%	4.47%	5.49%	5.04%
		6) Not at all	6.24%	0.46%	5.39%	7.20%	6.81%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Code 6 versus all other codes. Pearson Chi Square (1, 389) = 193.176; p<.001; Cohen's d = 1.003, CI(95%) = 0.8423 to 1.1636.

Study child age 11 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Every day or almost every day	32.45	7.09	18.51	46.40	28
		2) Several times a week	17.45	4.71	8.19	26.71	18
		3) Once or twice a week	45.31	8.28	29.02	61.59	44
		4) Once or twice a month	33.77	6.46	21.07	46.47	31
		5) Less often than once a month	23.26	5.90	11.65	34.86	19
		6) Not at all	45.09	9.12	27.15	63.03	37
		Total	197.32	19.64	158.72	235.93	177
	% of Total	1) Every day or almost every day	16.45%	3.16%	11.13%	23.62%	15.82%
		2) Several times a week	8.84%	2.26%	5.29%	14.41%	10.17%
		3) Once or twice a week	22.96%	3.44%	16.90%	30.39%	24.86%
		4) Once or twice a month	17.11%	3.05%	11.92%	23.95%	17.51%
		5) Less often than once a month	11.79%	2.80%	7.30%	18.49%	10.73%
		6) Not at all	22.85%	3.77%	16.28%	31.08%	20.90%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Every day or almost every day	2,905.50	130.60	2,648.73	3,162.26	3,042
		2) Several times a week	3,120.80	129.16	2,866.87	3,374.74	3,083
		3) Once or twice a week	3,566.23	151.47	3,268.43	3,864.02	3,508
		4) Once or twice a month	1,236.91	65.49	1,108.15	1,365.67	1,187
		5) Less often than once a month	451.78	32.85	387.20	516.37	468
		6) Not at all	389.09	40.16	310.14	468.04	449
		Total	11,670.30	424.65	10,835.41	12,505.20	11,737
	% of Total	1) Every day or almost every day	24.90%	0.76%	23.43%	26.43%	25.92%
		2) Several times a week	26.74%	0.56%	25.66%	27.85%	26.27%
		3) Once or twice a week	30.56%	0.57%	29.44%	31.70%	29.89%
		4) Once or twice a month	10.60%	0.42%	9.81%	11.45%	10.11%
		5) Less often than once a month	3.87%	0.25%	3.41%	4.39%	3.99%
		6)Not at all	3.33%	0.30%	2.80%	3.97%	3.83%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Code 6 versus all other codes. Pearson Chi Square (1, 389) = 210.491; p<.001; Cohen's d = 1.1855, CI(95%) = 0.994 to 1.377.

Appendix 1.51: Main respondent's perception of how easy or difficult the move to secondary school will be: child age 11 years

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	1) Very easy	24.12	7.09	10.19	38.05	18
		2) Fairly easy	40.04	7.56	25.17	54.91	37
		3) Neither easy nor difficult	25.36	6.02	13.53	37.19	24
		4) Fairly difficult	51.38	8.65	34.36	68.39	53
		5) Very difficult	32.61	7.53	17.80	47.41	25
		Total	173.50	17.51	139.08	207.93	157
	% of Total	1) Very easy	13.90%	3.68%	8.11%	22.81%	11.46%
		2) Fairly easy	23.08%	3.82%	16.42%	31.42%	23.57%
		3) Neither easy nor difficult	14.61%	3.31%	9.23%	22.37%	15.29%
		4) Fairly difficult	29.61%	3.99%	22.40%	38.00%	33.76%
		5) Very difficult	18.79%	3.82%	12.39%	27.46%	15.92%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	1) Very easy	2,713.44	126.33	2,465.07	2,961.81	2,875
		2) Fairly easy	5,755.68	229.95	5,303.58	6,207.78	5,776
		3) Neither easy nor difficult	1,428.76	68.12	1,294.82	1,562.70	1,404
		4) Fairly difficult	1,065.01	53.62	959.59	1,170.44	1,019
		5) Very difficult	173.86	17.73	139.00	208.71	168
		Total	11,136.75	416.97	10,316.95	11,956.54	11,242
	% of Total	1) Very easy	24.36%	0.62%	23.16%	25.61%	25.57%
		2) Fairly easy	51.68%	0.63%	50.44%	52.93%	51.38%
		3) Neither easy nor difficult	12.83%	0.44%	11.98%	13.72%	12.49%
		4) Fairly difficult	9.56%	0.35%	8.91%	10.26%	9.06%
		5) Very difficult	1.56%	0.14%	1.30%	1.87%	1.49%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Codes 1, 2 & 3 versus codes 4 & 5. Pearson Chi Square (1, 389) = 231.699; p<.001; Cohen's d = 1.1105, CI(95%) = 0.9432 to 1.2779.

Appendix 1.52: Mother who wanted their child to stay on at school

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
autism/ asperger's	Frequency	Yes	205.13	20.42	164.98	245.27	183
		No	11.38	3.69	4.12	18.64	12
		Total	216.51	21.45	174.33	258.68	195
	% of Total	Yes	94.74%	1.60%	90.57%	97.13%	93.85%
		No	5.26%	1.60%	2.87%	9.43%	6.15%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
without autism/ asperger's	Frequency	Yes	12,790.24	464.11	11,877.77	13,702.71	12,911
		No	275.04	22.93	229.96	320.11	241
		Total	13,065.28	473.80	12,133.75	13,996.81	13,152
	% of Total	Yes	97.89%	0.16%	97.56%	98.18%	98.17%
		No	2.11%	0.16%	1.82%	2.44%	1.83%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi Square (1, 389) = 10.069; p=.003; Cohen's d = 0.5225, CI(95%) =0.1869 to 0.8581. Not significant after Holm-Bonferroni correction was applied.

Appendix 1.53: Definition of small, medium and large differences.

Small, medium and large differences are referred to throughout the text. These are defined using statistical guidelines called Cohen's d. Each aspect of analysis produces an 'effect size'. These effect sizes are reported underneath each relevant table in Appendix 2.

Cohen's d guidelines for these effect sizes are as follows:

Small=.2

Medium=.5

Large=.8

Primary, Post-primary and Special education Appendices 2.1-2.58

Appendix 2.1: Primary, post primary and special pupils recorded as having autism or aspergers by Trust: Years 1-12

Trust		2008/09	2009/10	2010/11	2011/12	2012/13
Belfast	**Autism/aspergers**	641	768	928	1,071	1,195
	All pupils	47010	46355	45998	46107	46613
	% with autism/aspergers	1.4%	1.7%	2.0%	2.3%	2.6%
Northern	**Autism/aspergers**	595	679	786	900	1,094
	All pupils	70168	69927	69764	69512	70032
	% with autism/aspergers	0.8%	1.0%	1.1%	1.3%	1.6%
South Eastern	**Autism/aspergers**	830	904	1,048	1,164	1,278
	All pupils	51320	51339	51286	51352	51690
	% with autism/aspergers	1.6%	1.8%	2.0%	2.3%	2.5%
Southern	**Autism/aspergers**	687	731	733	731	712
	All pupils	57566	57788	58038	58541	59546
	% with autism/aspergers	1.2%	1.3%	1.3%	1.2%	1.2%
Western	**Autism/aspergers**	461	520	569	630	670
	All pupils	49429	48852	48469	48307	48000
	% with autism/aspergers	0.9%	1.1%	1.2%	1.3%	1.4%
Northern Ireland	**Autism/aspergers**	3,278	3,668	4,111	4,540	4,986
	All pupils	280,127	278,020	276,776	276,606	278,333
	% with autism/aspergers	1.2%	1.3%	1.5%	1.6%	1.8%

Note.
Figures relate to children in Year 1 - 12 in grant-aided primary, post-primary and special schools.
Figures for children with autism or Asperger's relate to children at Stage 1 - 5 o the SEN Code of Practice.

Appendix 2.2: Primary, post primary and special - Pupils recorded as having Autism or Aspergers - 2006/07

Year group	Pupils with Autism		Pupils with Aspergers		Total Pupils
Nursery and reception	54	0.61%	*	-	8,865
1	156	0.72%	26	0.12%	21,702
2	176	0.81%	30	0.14%	21,760
3	198	0.88%	65	0.29%	22,428
4	205	0.87%	98	0.42%	23,489
5	190	0.80%	101	0.42%	23,799
6	170	0.69%	129	0.53%	24,569
7	142	0.60%	112	0.47%	23,685
8	116	0.48%	137	0.57%	23,978
9	87	0.36%	153	0.62%	24,487
10	88	0.35%	118	0.47%	24,890
11	65	0.25%	106	0.41%	26,039

12	37	0.14%	74	0.28%	26,120
13	27	0.19%	24	0.17%	14,233
14	24	0.20%	#	-	12,196
15	11	5.19%	0	0.00%	212
Total	1,746	0.54%	1,180	0.37%	322,452

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.3: Primary, post primary and special - Pupils recorded as having Autism or Aspergers- 2007/08

Year group	**Pupils with Autism**		**Pupils with Aspergers**		**Total**
Nursery and reception	47	0.53%	7	0.08%	8,817
1	144	0.66%	21	0.10%	21,754
2	195	0.89%	45	0.21%	21,810
3	181	0.83%	40	0.18%	21,840
4	221	0.98%	78	0.35%	22,470
5	206	0.87%	111	0.47%	23,549
6	190	0.80%	105	0.44%	23,854
7	180	0.73%	140	0.57%	24,697
8	114	0.48%	153	0.65%	23,541
9	125	0.52%	160	0.67%	24,047
10	98	0.40%	165	0.67%	24,549
11	76	0.30%	122	0.49%	24,953
12	64	0.25%	116	0.45%	25,871
13	26	0.17%	39	0.26%	15,000
14	27	0.22%	20	0.16%	12,131
15	11	4.28%	0	0.00%	257
Total	1,905	0.60%	1,322	0.41%	319,140

Appendix 2.4: Primary, post primary and special - Pupils recorded as having Autism or Aspergers - 2008/09

Year group	**Pupils with Autism**		**Pupils with Autism/Aspergers**		**Total**
Nursery and reception	45	0.50%	5	0.06%	8,942
1	171	0.77%	31	0.14%	22,291
2	162	0.74%	47	0.22%	21,824
3	203	0.93%	53	0.24%	21,889
4	188	0.86%	58	0.27%	21,866
5	218	0.97%	110	0.49%	22,540
6	218	0.92%	122	0.52%	23,614

7	201	0.84%	121	0.50%	23,972
8	170	0.69%	149	0.60%	24,666
9	126	0.53%	158	0.67%	23,685
10	136	0.56%	171	0.71%	24,185
11	101	0.41%	172	0.70%	24,719
12	83	0.33%	129	0.52%	24,876
13	35	0.23%	48	0.31%	15,397
14	16	0.13%	26	0.21%	12,666
15	19	8.15%	0	0.00%	233
Total	2,092	0.66%	1,400	0.44%	317,365

Appendix 2.5: Primary, post primary and special - Pupils recorded as having Autism or Aspergers - 2009/10

Year group	**Pupils with Autism**		**Pupils with Autism/Aspergers**		**Total**
Nursery and reception	58	0.65%	*	-	8,978
1	196	0.87%	#	-	22,593
2	213	0.95%	65	0.29%	22,356
3	186	0.85%	66	0.30%	21,801
4	215	0.98%	83	0.38%	21,896
5	202	0.92%	88	0.40%	21,892
6	230	1.02%	126	0.56%	22,526
7	236	1.00%	147	0.62%	23,697
8	187	0.78%	151	0.63%	23,913
9	186	0.75%	167	0.68%	24,693
10	128	0.54%	171	0.72%	23,730
11	146	0.60%	181	0.74%	24,324
12	97	0.39%	181	0.74%	24,599
13	53	0.34%	48	0.31%	15,515
14	29	0.22%	35	0.27%	13,168
15	14	6.45%	0	0.00%	217
Total	2,376	0.75%	1,556	0.49%	315,898

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.6: Primary, post primary and special - Pupils recorded as having Autism or Aspergers - 2010/11

Year group	**Pupils with Autism**		**Pupils with Aspergers**		**Total**
Nursery and reception	70	0.77%	*	-	9,131
1	214	0.94%	35	0.15%	22,800

2	244	1.08%	73	0.32%	22,691
3	242	1.08%	92	0.41%	22,390
4	215	0.98%	93	0.43%	21,854
5	234	1.07%	111	0.51%	21,944
6	222	1.01%	125	0.57%	21,953
7	254	1.12%	142	0.63%	22,618
8	223	0.94%	197	0.83%	23,690
9	205	0.85%	175	0.73%	23,992
10	194	0.78%	185	0.75%	24,792
11	141	0.59%	180	0.75%	23,854
12	139	0.57%	197	0.81%	24,198
13	66	0.41%	96	0.60%	16,060
14	42	0.31%	36	0.27%	13,473
15	25	8.39%	#	-	298
Total	2,730	0.86%	1,746	0.55%	315,738

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.7: Primary, post primary and special - Pupils recorded as having Autism or Aspergers - 2011/12

Year group	**Pupils with Autism**		**Pupils with Aspergers**		**Total**
Nursery and reception	107	1.16%	5	0.05%	9,259
1	252	1.06%	41	0.17%	23,856
2	289	1.27%	51	0.22%	22,802
3	279	1.23%	106	0.47%	22,683
4	277	1.24%	113	0.50%	22,400
5	236	1.08%	119	0.54%	21,857
6	262	1.20%	129	0.59%	21,916
7	252	1.14%	141	0.64%	22,040
8	256	1.13%	168	0.74%	22,561
9	231	0.97%	229	0.97%	23,720
10	216	0.90%	187	0.78%	24,075
11	215	0.86%	202	0.81%	24,952
12	136	0.57%	178	0.75%	23,744
13	72	0.45%	110	0.69%	16,024
14	64	0.46%	77	0.56%	13,854
15	27	9.03%	*	-	299
Total	3,171	1.00%	1,857	0.59%	316,042

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.8: Primary, post primary and special - Pupils recorded as having Autism or Aspergers - 2012/13

Year group	Pupils with Autism		Pupils with Aspergers		Total
Nursery and reception	104	1.12%	*	-	9,278
1	295	1.17%	33	0.13%	25,186
2	319	1.34%	67	0.28%	23,865
3	318	1.39%	68	0.30%	22,841
4	314	1.38%	122	0.54%	22,686
5	287	1.28%	135	0.60%	22,384
6	262	1.20%	137	0.63%	21,906
7	273	1.24%	154	0.70%	21,993
8	265	1.20%	178	0.81%	22,001
9	260	1.15%	187	0.83%	22,626
10	253	1.06%	243	1.02%	23,822
11	219	0.90%	204	0.84%	24,255
12	207	0.84%	210	0.85%	24,768
13	93	0.57%	117	0.71%	16,430
14	63	0.45%	93	0.67%	13,949
15	44	12.39%	*	-	355
Total	3,576	1.12%	1,955	0.61%	318,345

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.9: Tracking proportion of children recorded as having autism within cohorts across time.

Year group	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Nursery and reception	0.61%	0.53%	0.50%	0.65%	0.77%	1.16%	1.12%
1	0.72%	0.66%	0.77%	0.87%	0.94%	1.06%	1.17%
2	0.81%	0.89%	0.74%	0.95%	1.08%	1.27%	1.34%
3	0.88%	0.83%	0.93%	0.85%	1.08%	1.23%	1.39%
4	0.87%	0.98%	0.86%	0.98%	0.98%	1.24%	1.38%
5	0.80%	0.87%	0.97%	0.92%	1.07%	1.08%	1.28%
6	0.69%	0.80%	0.92%	1.02%	1.01%	1.20%	1.20%
7	0.60%	0.73%	0.84%	1.00%	1.12%	1.14%	1.24%
8	0.48%	0.48%	0.69%	0.78%	0.94%	1.13%	1.20%
9	0.36%	0.52%	0.53%	0.75%	0.85%	0.97%	1.15%
10	0.35%	0.40%	0.56%	0.54%	0.78%	0.90%	1.06%
11	0.25%	0.30%	0.41%	0.60%	0.59%	0.86%	0.90%
12	0.14%	0.25%	0.33%	0.39%	0.57%	0.57%	0.84%
13	0.19%	0.17%	0.23%	0.34%	0.41%	0.45%	0.57%
14	0.20%	0.22%	0.13%	0.22%	0.31%	0.46%	0.45%
15	5.19%	4.28%	8.15%	6.45%	8.39%	9.03%	12.39%

Appendix 2.10: Tracking proportion of children recorded as having aspergers within cohorts across time.

Year group	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Nursery and reception	-	0.08%	0.06%	-	-	0.05%	-
1	0.12%	0.10%	0.14%	-	0.15%	0.17%	0.13%
2	0.14%	0.21%	0.22%	0.29%	0.32%	0.22%	0.28%
3	0.29%	0.18%	0.24%	0.30%	0.41%	0.47%	0.30%
4	0.42%	0.35%	0.27%	0.38%	0.43%	0.50%	0.54%
5	0.42%	0.47%	0.49%	0.40%	0.51%	0.54%	0.60%
6	0.53%	0.44%	0.52%	0.56%	0.57%	0.59%	0.63%
7	0.47%	0.57%	0.50%	0.62%	0.63%	0.64%	0.70%
8	0.57%	0.65%	0.60%	0.63%	0.83%	0.74%	0.81%
9	0.62%	0.67%	0.67%	0.68%	0.73%	0.97%	0.83%
10	0.47%	0.67%	0.71%	0.72%	0.75%	0.78%	1.02%
11	0.41%	0.49%	0.70%	0.74%	0.75%	0.81%	0.84%
12	0.28%	0.45%	0.52%	0.74%	0.81%	0.75%	0.85%
13	0.17%	0.26%	0.31%	0.31%	0.60%	0.69%	0.71%
14	-	0.16%	0.21%	0.27%	0.27%	0.56%	0.67%
15	0.00%	0.00%	0.00%	0.00%	-	-	-

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.11: Mainstream and special - Pupils recorded as having Autism or Aspergers - 2006/07

Year group	Mainstream with autism		Special with autism		Total with autism	Mainstream with aspergers		Special with aspergers		Total with aspergers
	N	% of total with autism	N	% of total with autism		N	% of total with aspergers	N	% of total with asperger	
Nursery/reception	19	35.19%	35	64.81%	54	*	-	0	-	*
1	107	68.59%	49	31.41%	156	#	-	*	-	26
2	106	60.23%	70	39.77%	176	#	-	*	-	30
3	132	66.67%	66	33.33%	198	60	92.31%	5	7.69%	65
4	138	67.32%	67	32.68%	205	#	-	*	-	98
5	127	66.84%	63	33.16%	190	96	95.05%	5	4.95%	101
6	106	62.35%	64	37.65%	170	121	93.80%	8	6.20%	129
7	85	59.86%	57	40.14%	142	#	-	*	-	112
8	68	58.62%	48	41.38%	116	120	87.59%	17	12.41%	137
9	30	34.48%	57	65.52%	87	143	93.46%	10	6.54%	153
10	36	40.91%	52	59.09%	88	108	91.53%	10	8.47%	118
11	25	38.46%	40	61.54%	65	98	92.45%	8	7.55%	106
12	#	-	#	-	37	66	89.19%	8	10.81%	74
13	*	-	#	-	27	#	-	*	-	24
14	*	-	#	-	24	#	-	0	-	#
15	0	0.00%	11	100.00%	11	0	-	0	-	0
Total	995	56.99%	751	43.01%	1,746	1,100	93.22%	80	6.78%	1,180

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.12: Mainstream and special - Pupils recorded as having Autism or Aspergers - 2007/08

Year group	Mainstream with autism		Special with autism		Total with autism	Mainstream with aspergers		Special with aspergers		Total with aspergers
	N	% of total with autism	N	% of total with autism		N	% of total with asperger	N	% of total with asperger	
Nursery/reception	12	25.53%	35	74.47%	47	7	100.00%	0	0.00%	7
1	85	59.03%	59	40.97%	144	21	100.00%	0	0.00%	21
2	133	68.21%	62	31.79%	195	#	-	*	-	45
3	111	61.33%	70	38.67%	181	#	-	*	-	40
4	143	64.71%	78	35.29%	221	72	92.31%	6	7.69%	78
5	145	70.39%	61	29.61%	206	#	-	*	-	111
6	126	66.32%	64	33.68%	190	99	94.29%	6	5.71%	105
7	110	61.11%	70	38.89%	180	133	95.00%	7	5.00%	140
8	59	51.75%	55	48.25%	114	142	92.81%	11	7.19%	153
9	71	56.80%	54	43.20%	125	142	88.75%	18	11.25%	160

10	33	33.67%	65	66.33%	98	155	93.94%	10	6.06%	165
11	32	42.11%	44	57.89%	76	112	91.80%	10	8.20%	122
12	28	43.75%	36	56.25%	64	107	92.24%	9	7.76%	116
13	#	-	#	-	26	#	-	*	-	39
14	*	-	#	-	27	20	100.00%	0	0.00%	20
15	0	0.00%	11	100.00%	11	0	-	0	-	0
Total	1,095	57.48%	810	42.52%	1,905	1,235	93.42%	87	6.58%	1,322

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.13: Mainstream and special - Pupils recorded as having Autism or Aspergers- 2008/09

Year group	**Mainstream with autism**		**Special with autism**		**Total with autism**	**Mainstream with aspergers**		**Special with aspergers**		**Total with aspergers**
	N	**% of total with autism**	**N**	**% of total with autism**		**N**	**% of total with aspergers**	**N**	**% of total with aspergers**	
Nursery/reception	13	28.89%	32	71.11%	45	5	100.00%	0	0.00%	5
1	111	64.91%	60	35.09%	171	31	100.00%	0	0.00%	31
2	105	64.81%	57	35.19%	162	47	100.00%	0	0.00%	47
3	135	66.50%	68	33.50%	203	#	-	*	-	53
4	121	64.36%	67	35.64%	188	#	-	*	-	58
5	141	64.68%	77	35.32%	218	103	93.64%	7	6.36%	110
6	157	72.02%	61	27.98%	218	#	-	*	-	122
7	134	66.67%	67	33.33%	201	115	95.04%	6	4.96%	121
8	85	50.00%	85	50.00%	170	137	91.95%	12	8.05%	149
9	68	53.97%	58	46.03%	126	150	94.94%	8	5.06%	158
10	80	58.82%	56	41.18%	136	153	89.47%	18	10.53%	171
11	32	31.68%	69	68.32%	101	161	93.60%	11	6.40%	172
12	38	45.78%	45	54.22%	83	121	93.80%	8	6.20%	129
13	#	-	#	-	35	#	-	*	-	48
14	*	-	#	-	16	26	100.00%	0	0.00%	26
15	0	0.00%	19	100.00%	19	0	-	0	-	0
Total	1,229	58.75%	863	41.25%	2,092	1,320	94.29%	80	5.71%	1,400

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.14: Mainstream and special - Pupils recorded as having Autism or Aspergers - 2009/10

Year group	Mainstream with autism		Special with autism		Total with autism	Mainstream with aspergers		Special with aspergers		Total with aspergers
	N	% of total with autism	N	% of total with autism		N	% of total with aspergers	N	% of total with aspergers	
Nursery/reception	28	48.28%	30	51.72%	58	*	-	0	-	*
1	138	70.41%	58	29.59%	196	#	-	0	-	#
2	145	68.08%	68	31.92%	213	65	100.00%	0	0.00%	65
3	130	69.89%	56	30.11%	186	66	100.00%	0	0.00%	66
4	145	67.44%	70	32.56%	215	#	-	*	-	83
5	139	68.81%	63	31.19%	202	#	-	*	-	88
6	155	67.39%	75	32.61%	230	119	94.44%	7	5.56%	126
7	174	73.73%	62	26.27%	236	#	-	*	-	147
8	116	62.03%	71	37.97%	187	145	96.03%	6	3.97%	151
9	96	51.61%	90	48.39%	186	152	91.02%	15	8.98%	167
10	66	51.56%	62	48.44%	128	164	95.91%	7	4.09%	171
11	81	55.48%	65	44.52%	146	163	90.06%	18	9.94%	181
12	37	38.14%	60	61.86%	97	170	93.92%	11	6.08%	181
13	#	-	#	-	53	48	100.00%	0	0.00%	48
14	*	-	#	-	29	#	-	*	-	35
15	0	0.00%	14	100.00%	14	0	-	0	-	0
Total	1,468	61.78%	908	38.22%	2,376	1,482	95.24%	74	4.76%	1,556

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.15: Mainstream and special - Pupils recorded as having Autism or Aspergers - 2010/11

Year group	Mainstream with autism		Special with autism		Total with autism	Mainstream with aspergers		Special with aspergers		Total with aspergers
	N	% of total with autism	N	% of total with autism		N	% of total with aspergers	N	% of total with aspergers	
Nursery/reception	35	32.71%	72	67.29%	107	0	0.00%	5	100.00%	5
1	175	69.44%	77	30.56%	252	#	-	*	-	41
2	199	68.86%	90	31.14%	289	#	-	*	-	51
3	214	76.70%	65	23.30%	279	#	-	*	-	106
4	206	74.37%	71	25.63%	277	#	-	*	-	113
5	172	72.88%	64	27.12%	236	#	-	*	-	119
6	178	67.94%	84	32.06%	262	#	-	*	-	129
7	165	65.48%	87	34.52%	252	135	95.74%	6	4.26%	141
8	161	62.89%	95	37.11%	256	157	93.45%	11	6.55%	168
9	168	72.73%	63	27.27%	231	212	92.58%	17	7.42%	229
10	137	63.43%	79	36.57%	216	177	94.65%	10	5.35%	187
11	109	50.70%	106	49.30%	215	184	91.09%	18	8.91%	202
12	72	52.94%	64	47.06%	136	168	94.38%	10	5.62%	178
13	32	44.44%	40	55.56%	72	#	-	*	-	110
14	13	20.31%	51	79.69%	64	#	-	*	-	77
15	0	0.00%	27	100.00%	27	*	-	0	-	*
Total	2,036	64.21%	1,135	35.79%	3,171	1,764	94.99%	93	5.01%	1,857

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.16: mainstream and special – Pupils recorded as having autism or Asperger's – 2011/12

Year group	Mainstream with autism		Special with autism		Total with autism	Mainstream with aspergers		Special with aspergers		Total with aspergers
	N	% of total with autism	N	% of total with autism		N	% of total with aspergers	N	% of total with aspergers	
Nursery/reception	28	40.00%	42	60.00%	70	*	-	0	-	*
1	149	69.63%	65	30.37%	214	35	100.00%	0	0.00%	35
2	180	73.77%	64	26.23%	244	#	-	*	-	73
3	177	73.14%	65	26.86%	242	92	100.00%	0	0.00%	92
4	149	69.30%	66	30.70%	215	93	100.00%	0	0.00%	93
5	161	68.80%	73	31.20%	234	#	-	*	-	111
6	155	69.82%	67	30.18%	222	#	-	*	-	125
7	170	66.93%	84	33.07%	254	132	92.96%	10	7.04%	142
8	159	71.30%	64	28.70%	223	181	91.88%	16	8.12%	197
9	128	62.44%	77	37.56%	205	163	93.14%	12	6.86%	175
10	99	51.03%	95	48.97%	194	168	90.81%	17	9.19%	185
11	70	49.65%	71	50.35%	141	171	95.00%	9	5.00%	180
12	85	61.15%	54	38.85%	139	177	89.85%	20	10.15%	197
13	15	22.73%	51	77.27%	66	#	-	*	-	96
14	8	19.05%	34	80.95%	42	36	100.00%	0	0.00%	36
15	0	0.00%	25	100.00%	25	#	-	*	-	#
Total	1,733	63.48%	997	36.52%	2,730	1,650	94.50%	96	5.50%	1,746

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.17: Mainstream and special - Pupils recorded as having Autism or Aspergers- 2012/13

Year group	Mainstream with autism		Special with autism		Total with autism	Mainstream with aspergers		Special with aspergers		Total with aspergers
	N	% of total with autism	N	% of total with autism		N	% of total with aspergers	N	% of total with aspergers	
Nursery/reception	43	41.35%	61	58.65%	104	*	-	0	-	*
1	191	64.75%	104	35.25%	295	#	-	*	-	33
2	229	71.79%	90	28.21%	319	#	-	*	-	67
3	226	71.07%	92	28.93%	318	#	-	*	-	68
4	239	76.11%	75	23.89%	314	#	-	*	-	122
5	218	75.96%	69	24.04%	287	#	-	*	-	135
6	184	70.23%	78	29.77%	262	#	-	*	-	137
7	185	67.77%	88	32.23%	273	#	-	*	-	154
8	166	62.64%	99	37.36%	265	170	95.51%	8	4.49%	178
9	168	64.62%	92	35.38%	260	175	93.58%	12	6.42%	187
10	177	69.96%	76	30.04%	253	227	93.42%	16	6.58%	243
11	137	62.56%	82	37.44%	219	194	95.10%	10	4.90%	204
12	105	50.72%	102	49.28%	207	194	92.38%	16	7.62%	210
13	33	35.48%	60	64.52%	93	#	-	*	-	117
14	20	31.75%	43	68.25%	63	#	-	*	-	93
15	0	0.00%	44	100.00%	44	*	-	*	-	*
Total	2,321	64.90%	1,255	35.10%	3,576	1,874	95.86%	81	4.14%	1,955

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.

Appendix 2.18: Proportion of students with autism/aspergers by year group and academic year.

Year group		Academic year						
		2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1	Autism/Aspergers	182	165	202	-	249	293	328
	% with Aspergers	14.3%	12.7%	15.3%	-	14.1%	14.0%	10.1%
	% all pupils	0.84%	0.76%	0.91%	-	1.09%	1.23%	1.30%
2	Autism/Aspergers	206	240	209	278	317	340	386
	% with Aspergers	14.6%	18.8%	22.5%	23.4%	23.0%	15.0%	17.4%
	% all pupils	0.95%	1.10%	0.96%	1.24%	1.40%	1.49%	1.62%
3	Autism/Aspergers	263	221	256	252	334	385	386
	% with Aspergers	24.7%	18.1%	20.7%	26.2%	27.5%	27.5%	17.6%
	% all pupils	1.17%	1.01%	1.17%	1.16%	1.49%	1.70%	1.69%
4	Autism/Aspergers	303	299	246	298	308	390	436
	% with Aspergers	32.3%	26.1%	23.6%	27.9%	30.2%	29.0%	28.0%
	% all pupils	1.29%	1.33%	1.13%	1.36%	1.41%	1.74%	1.92%
5	Autism/Aspergers	291	317	328	290	345	355	422
	% with Aspergers	34.7%	35.0%	33.5%	30.3%	32.2%	33.5%	32.0%
	% all pupils	1.22%	1.35%	1.46%	1.32%	1.57%	1.62%	1.89%
6	Autism/Aspergers	299	295	340	356	347	391	399
	% with Aspergers	43.1%	35.6%	35.9%	35.4%	36.0%	33.0%	34.3%
	% all pupils	1.22%	1.24%	1.44%	1.58%	1.58%	1.78%	1.82%
7	Autism/Aspergers	254	320	322	383	396	393	427
	% with Aspergers	44.1%	43.8%	37.6%	38.4%	35.9%	35.9%	36.1%
	% all pupils	1.07%	1.30%	1.34%	1.62%	1.75%	1.78%	1.94%
8	Autism/Aspergers	253	267	319	338	420	424	443
	% with Aspergers	54.2%	57.3%	46.7%	44.7%	46.9%	39.6%	40.2%
	% all pupils	1.06%	1.13%	1.29%	1.41%	1.77%	1.88%	2.01%
9	Autism/Aspergers	240	285	284	353	380	460	447
	% with Aspergers	63.8%	56.1%	55.6%	47.3%	46.1%	49.8%	41.8%
	% all pupils	0.98%	1.19%	1.20%	1.43%	1.58%	1.94%	1.98%
10	Autism/Aspergers	206	263	307	299	379	403	496
	% with Aspergers	57.3%	62.7%	55.7%	57.2%	48.8%	46.4%	49.0%
	% all pupils	0.83%	1.07%	1.27%	1.26%	1.53%	1.67%	2.08%
11	Autism/Aspergers	171	198	273	327	321	417	423
	% with Aspergers	62.0%	61.6%	63.0%	55.4%	56.1%	48.4%	48.2%
	% all pupils	0.66%	0.79%	1.10%	1.34%	1.35%	1.67%	1.74%
12	Autism/Aspergers	111	180	212	278	336	314	417
	% with Aspergers	66.7%	64.4%	60.8%	65.1%	58.6%	56.7%	50.4%
	% all pupils	0.42%	0.70%	0.85%	1.13%	1.39%	1.32%	1.68%
13	Autism/Aspergers	51	65	83	101	162	182	210
	% with Aspergers	47.1%	60.0%	57.8%	47.5%	59.3%	60.4%	55.7%
	% all pupils	0.36%	0.43%	0.54%	0.65%	1.01%	1.14%	1.28%
14	Autism/Aspergers	-	47	42	64	78	141	156
	% with Aspergers	-	42.6%	61.9%	54.7%	46.2%	54.6%	59.6%
	% all pupils	-	0.39%	0.33%	0.49%	0.58%	1.02%	1.12%

Note. '*' denotes fewer than 5 pupils; '#' denotes figure more than or equal to 5 suppressed to avoid; '-' denotes unable to compute.
Autism/Aspergers = number of children with autism or aspergers.
% with Aspergers = % of children in the autism/aspergers group who have aspergers
% of all pupils = % of children with autism/aspergers out of all pupils.

Appendix 2.19: Primary, post primary and special - Pupils recorded as having Autism or Aspergers and are entitled to free school meals - 2006/07

School type	Total pupils			Total FSM pupils			% FSM		
	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers
Primary	820	536	166,774	162	102	31,462	19.76%	19.03%	18.87%
Post primary	175	564	149,026	34	121	27,165	19.43%	21.45%	18.23%
Special	751	80	3,726	250	20	1,627	33.29%	25.00%	43.67%
Total	1,746	1,180	319,526	446	243	60,254	25.54%	20.59%	18.86%

Note. DENI do not validate FSME data for special schools. Primary includes nursery, reception and year 1 - 7 classes.

Appendix 2.20: Primary, post primary and special - Pupils recorded as having Autism or Aspergers and are entitled to free school meals - 2007/08

School type	Total pupils			Total FSM pupils			% FSM		
	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers
Primary	865	520	165,202	174	97	29,342	20.12%	18.65%	17.76%
Post primary	230	715	146,997	51	139	24,977	22.17%	19.44%	16.99%
Special	810	87	3,714	271	19	1,635	33.46%	21.84%	44.02%
Total	1,905	1,322	315,913	496	255	55,954	26.04%	19.29%	17.71%

Note. DENI do not validate FSME data for special schools. Primary includes nursery, reception and year 1 - 7 classes.

Appendix 2.21: Primary, post primary and special - Pupils recorded as having Autism or Aspergers and are entitled to free school meals - 2008/09

School type	Total pupils			Total FSM pupils			% FSM		
	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers
Primary	917	527	163,337	196	114	28,109	21.37%	21.63%	17.21%
Post primary	312	793	146,881	76	133	24,180	24.36%	16.77%	16.46%
Special	863	80	3,655	284	21	1,548	32.91%	26.25%	42.35%
Total	2,092	1,400	313,873	556	268	53,837	26.58%	19.14%	17.15%

Note. DENI do not validate FSME data for special schools. Primary includes nursery, reception and year 1 - 7 classes.

Appendix 2.22: Primary, post primary and special - Pupils recorded as having Autism or Aspergers and are entitled to free school meals - 2009/10

School type	Total pupils			Total FSM pupils			% FSM		
	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers
Primary	1,054	606	162,036	246	135	30,470	23.34%	22.28%	18.80%
Post primary	414	876	146,469	97	171	25,495	23.43%	19.52%	17.41%
Special	908	74	3,461	309	25	1,550	34.03%	33.78%	44.78%
Total	2,376	1,556	311,966	652	331	57,515	27.44%	21.27%	18.44%

Note. DENI do not validate FSME data for special schools. Primary includes nursery, reception and year 1 - 7 classes.

Appendix 2.23: Primary, post primary and special - Pupils recorded as having Autism or Aspergers and are entitled to free school meals - 2010/11

School type	Total pupils			Total FSM pupils			% FSM		
	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers
Primary	1,169	657	161,552	313	167	35,355	26.78%	25.42%	21.88%
Post primary	564	993	146,345	148	187	26,234	26.24%	18.83%	17.93%
Special	997	96	3,365	368	32	1,619	36.91%	33.33%	48.11%
Total	2,730	1,746	311,262	829	386	63,208	30.37%	22.11%	20.31%

Note. DENI do not validate FSME data for special schools. Primary includes nursery, reception and year 1 - 7 classes.

Appendix 2.24: Primary, post primary and special - Pupils recorded as having Autism or Aspergers and are entitled to free school meals - 2011/12

School type	Total pupils			Total FSM pupils			% FSM		
	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers
Primary	1,344	685	162,717	448	208	43,637	33.33%	30.36%	26.82%
Post primary	692	1,079	144,976	186	232	26,728	26.88%	21.50%	18.44%
Special	1,135	93	3,321	453	36	1,677	39.91%	38.71%	50.50%
Total	3,171	1,857	311,014	1,087	476	72,042	34.28%	25.63%	23.16%

Note. DENI do not validate FSME data for special schools. Primary includes nursery, reception and year 1 - 7 classes.

Appendix 2.25: Primary, post primary and special - Pupils recorded as having Autism or Aspergers and are entitled to free school meals - 2012/13

School type	Total pupils			Total FSM pupils			% FSM		
	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers	Autism	Aspergers	Without autism/ aspergers
Primary	1,515	707	165,812	555	234	49,386	36.63%	33.10%	29.78%
Post primary	806	1,167	143,685	230	269	27,202	28.54%	23.05%	18.93%
Special	1,255	81	3,317	560	32	1,783	44.62%	39.51%	53.75%
Total	3,576	1,955	312,814	1,345	535	78,371	37.61%	27.37%	25.05%

Note. DENI do not validate FSME data for special schools. Primary includes nursery, reception and year 1 - 7 classes.

Appendix 2.26: Primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 1 (most deprived) – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	167	199	222	256	282	328	398
	21.66%	23.92%	24.72%	24.78%	24.48%	24.68%	26.46%
Aspergers	141	145	155	174	192	208	196
	27.98%	28.32%	29.69%	29.10%	29.49%	30.59%	27.84%
Autism/Aspergers	308	344	377	430	474	536	594
	24.16%	25.60%	26.55%	26.36%	26.29%	26.68%	26.90%
Without Autism/Aspergers	40,251	40,399	40,402	39,840	39,908	40,534	41,434
	25.48%	25.44%	25.27%	25.01%	25.08%	25.20%	25.23%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.27: Primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 2 – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	173	184	202	247	292	346	373
	22.44%	22.12%	22.49%	23.91%	25.35%	26.03%	24.80%
Aspergers	108	104	108	121	134	130	145
	21.43%	20.31%	20.69%	20.23%	20.58%	19.12%	20.60%
Autism/Aspergers	281	288	310	368	426	476	518
	22.04%	21.43%	21.83%	22.56%	23.63%	23.69%	23.46%
Without Autism/Aspergers	36,925	37,265	37,692	37,520	37,712	38,136	38,714
	23.37%	23.46%	23.58%	23.55%	23.70%	23.71%	23.57%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.28: Primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 3 – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	221	218	239	252	267	309	359
	28.66%	26.20%	26.61%	24.39%	23.18%	23.25%	23.87%
Aspergers	93	103	110	132	141	149	146
	18.45%	20.12%	21.07%	22.07%	21.66%	21.91%	20.74%
Autism/Aspergers	314	321	349	384	408	458	505
	24.63%	23.88%	24.58%	23.54%	22.63%	22.80%	22.87%
Without Autism/Aspergers	37,890	38,260	38,676	39,040	38,989	39,571	40,718
	23.98%	24.09%	24.19%	24.51%	24.51%	24.60%	24.79%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.29: Primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 4 (least deprived) – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	210	231	235	278	311	346	374
	27.24%	27.76%	26.17%	26.91%	27.00%	26.03%	24.87%
Aspergers	162	160	149	171	184	193	217
	32.14%	31.25%	28.54%	28.60%	28.26%	28.38%	30.82%
Autism/Aspergers	372	391	384	449	495	539	591
	29.18%	29.09%	27.04%	27.53%	27.45%	26.83%	26.77%
Without Autism/Aspergers	42,913	42,892	43,105	42,893	42,483	42,598	43,353
	27.16%	27.01%	26.96%	26.93%	26.70%	26.48%	26.40%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.30: Post-primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 1 (most deprived) – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	41	46	59	84	113	144	165
	24.12%	20.72%	19.34%	20.64%	20.43%	21.08%	20.73%
Aspergers	108	152	183	198	236	265	296
	19.57%	21.71%	23.49%	23.16%	24.18%	24.86%	25.52%
Autism/Aspergers	149	198	242	282	349	409	461
	20.64%	21.48%	22.32%	22.35%	22.83%	23.38%	23.57%
Without Autism/Aspergers	36,992	35,986	35,869	35,351	35,031	34,653	34,296
	25.33%	24.83%	24.73%	24.40%	24.20%	24.12%	24.07%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.31: Post-primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 2 – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	48	71	87	115	147	162	194
	28.24%	31.98%	28.52%	28.26%	26.58%	23.72%	24.37%
Aspergers	134	162	175	190	206	224	259
	24.28%	23.14%	22.46%	22.22%	21.11%	21.01%	22.33%
Autism/Aspergers	182	233	262	305	353	386	453
	25.21%	25.27%	24.17%	24.17%	23.09%	22.07%	23.16%
Without Autism/Aspergers	33,286	33,251	33,268	33,279	33,397	33,095	32,878
	22.79%	22.95%	22.94%	22.97%	23.07%	23.04%	23.07%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.32: Post-primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 3 – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	40	54	80	103	152	186	224
	23.53%	24.32%	26.23%	25.31%	27.49%	27.23%	28.14%
Aspergers	134	163	172	182	208	217	229
	24.28%	23.29%	22.08%	21.29%	21.31%	20.36%	19.74%
Autism/Aspergers	174	217	252	285	360	403	453
	24.10%	23.54%	23.25%	22.58%	23.54%	23.04%	23.16%
Without Autism/Aspergers	34,911	34,764	34,984	35,424	35,602	35,404	35,153
	23.90%	23.99%	24.12%	24.45%	24.60%	24.64%	24.67%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.33: Post-primary pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 4 (least deprived) – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism	41	51	79	105	141	191	213
	24.12%	22.97%	25.90%	25.80%	25.50%	27.96%	26.76%
Aspergers	176	223	249	285	326	360	376
	31.88%	31.86%	31.96%	33.33%	33.40%	33.77%	32.41%
Autism/Aspergers	217	274	328	390	467	551	589
	30.06%	29.72%	30.26%	30.90%	30.54%	31.50%	30.11%
Without Autism/Aspergers	40,867	40,906	40,918	40,809	40,703	40,515	40,172
	27.98%	28.23%	28.21%	28.17%	28.12%	28.20%	28.19%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.34: Mainstream and special school pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 1 (most deprived) – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism (Special)	173	208	233	235	276	315	358
	24.13%	26.40%	27.77%	26.29%	27.96%	27.95%	28.78%
Aspergers (Special)	28	38	32	29	40	39	34
	40.58%	45.24%	41.56%	40.85%	41.67%	42.86%	41.98%
Autism/Aspergers (Special)	201	246	265	264	316	354	392
	25.57%	28.21%	28.93%	27.36%	29.18%	29.06%	29.58%
Without Autism/ Aspergers (Special)	1,294	1,358	1,336	1,250	1,211	1,264	1,298
	36.93%	37.94%	38.05%	36.92%	36.75%	38.83%	39.82%
Autism/ Aspergers (Mainstream)	457	542	619	712	823	945	1,055
	22.88%	23.92%	24.72%	24.61%	24.70%	25.15%	25.34%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.35: Mainstream and special school pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 2 – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism (Special)	170	178	188	202	213	258	299
	23.71%	22.59%	22.41%	22.60%	21.58%	22.89%	24.04%
Aspergers (Special)	15	15	13	16	26	24	18
	21.74%	17.86%	16.88%	22.54%	27.08%	26.37%	22.22%
Autism/Aspergers (Special)	185	193	201	218	239	282	317
	23.54%	22.13%	21.94%	22.59%	22.07%	23.15%	23.92%
Without Autism/ Aspergers (Special)	743	736	722	693	690	632	614
	21.20%	20.56%	20.56%	20.47%	20.94%	19.42%	18.83%
Autism/ Aspergers (Mainstream)	463	521	572	673	779	862	971
	23.18%	22.99%	22.84%	23.26%	23.38%	22.94%	23.32%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.36: Mainstream and special school pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 3 – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism (Special)	159	172	182	211	224	254	271
	22.18%	21.83%	21.69%	23.60%	22.70%	22.54%	21.78%
Aspergers (Special)	10	11	11	9	10	11	11
	14.49%	13.10%	14.29%	12.68%	10.42%	12.09%	13.58%
Autism/Aspergers (Special)	169	183	193	220	234	265	282
	21.50%	20.99%	21.07%	22.80%	21.61%	21.76%	21.28%
Without Autism/ Aspergers (Special)	662	676	649	649	638	636	614
	18.89%	18.89%	18.48%	19.17%	19.36%	19.54%	18.83%
Autism/ Aspergers (Mainstream)	488	538	601	669	768	861	958
	24.44%	23.74%	24.00%	23.12%	23.05%	22.91%	23.01%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.37: Mainstream and special school pupils recorded as having Autism or Aspergers who are in Northern Ireland MDM quartile band 4 (least deprived) – 2006/07 to 2012/13

	Academic year						
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Autism (Special)	215	230	236	246	274	300	316
	29.99%	29.19%	28.13%	27.52%	27.76%	26.62%	25.40%
Aspergers (Special)	16	20	21	17	20	17	18
	23.19%	23.81%	27.27%	23.94%	20.83%	18.68%	22.22%
Autism/Aspergers (Special)	231	250	257	263	294	317	334
	29.39%	28.67%	28.06%	27.25%	27.15%	26.03%	25.21%
Without Autism/ Aspergers (Special)	805	809	804	794	756	723	734
	22.97%	22.60%	22.90%	23.45%	22.94%	22.21%	22.52%
Autism/ Aspergers (Mainstream)	589	665	712	839	962	1,090	1,180
	29.49%	29.35%	28.43%	29.00%	28.87%	29.00%	28.34%

Note. MDM quartiles have been calculating using the ward resided in. 2. Pupils with no postcode provided/not recognised/unknown have been removed (2006/07 - 12130, 2007/08 - 8700, 2008/09 - 5520, 2009/10 - 4498, 2010/11 - 4203, 2011/12 - 3305, 2012/13 - 2878)

Appendix 2.38: Half days absent by reason for pupil enrolments with autism by school type, 2009/10

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		351,591	93.58%	132,790	91.13%	303,649	91.94%
Total half days absent		24,130	6.42%	12,922	8.87%	26,631	8.06%
Reason for absence	**Illness**	15,796	4.20%	6,143	4.22%	14,411	4.36%
	Medical/dental	1,027	0.27%	595	0.41%	1,378	0.42%
	other exceptional circumstances	1,560	0.42%	1,173	0.81%	3,575	1.08%
	Other authorised	927	0.25%	388	0.27%	1,246	0.38%
	Unauthorised	4,820	1.28%	4,623	3.17%	6,021	1.82%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.39: Half days absent by reason for pupil enrolments with aspergers by school type, 2009/10

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		205,554	93.73%	268,141	92.30%	23,037	86.05%
Total half days absent		13,754	6.27%	22,358	7.70%	3,736	13.95%
Reason for absence	**Illness**	8,842	4.03%	11,743	4.04%	1,316	4.92%
	Medical/dental	719	0.33%	1,009	0.35%	181	0.68%
	other exceptional circumstances	743	0.34%	1,903	0.66%	338	1.26%
	Other authorised	556	0.25%	721	0.25%	192	0.72%
	Unauthorised	2,894	1.32%	6,982	2.40%	1,709	6.38%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.40: Half days absent by reason for pupil enrolments without autism or aspergers by school type, 2009/10

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		53,336,731	94.73 %	40,068,790	92.29 %	1,141,647	88.26 %
Total half days absent		2,965,184	5.27%	3,348,280	7.71%	151,859	11.74 %
Reason for absence	**Illness**	1,884,739	3.35%	1,806,654	4.16%	69,251	5.35%
	Medical/dental	71,329	0.13%	141,328	0.33%	8,999	0.70%
	other exceptional circumstances	130,435	0.23%	160,764	0.37%	18,015	1.39%
	Other authorised	149,880	0.27%	129,778	0.30%	6,445	0.50%
	Unauthorised	728,801	1.29%	1,109,756	2.56%	49,149	3.80%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.41: Half days absent by reason for pupil enrolments with autism by school type, 2010/11

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		381,004	93.74%	178,417	91.36%	327,732	92.07%
Total half days absent		25,455	6.26%	16,871	8.64%	28,232	7.93%
Reason for absence	**Illness**	15,572	3.83%	7,570	3.88%	13,301	3.74%
	Medical/dental	1,224	0.30%	868	0.44%	1,536	0.43%
	other exceptional circumstances	2,391	0.59%	1,310	0.67%	5,912	1.66%
	Other authorised	969	0.24%	453	0.23%	1,154	0.32%
	Unauthorised	5,299	1.30%	6,670	3.42%	6,329	1.78%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.42: Half days absent by reason for pupil enrolments with aspergers by school type, 2010/11

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		219,773	93.58%	287,637	92.68%	30,328	88.91%
Total half days absent		15,086	6.42%	22,733	7.32%	3,782	11.09%
Reason for absence	**Illness**	9,025	3.84%	11,349	3.66%	1,091	3.20%
	Medical/dental	781	0.33%	1,196	0.39%	238	0.70%
	other exceptional circumstances	916	0.39%	1,738	0.56%	585	1.72%
	Other authorised	622	0.26%	884	0.28%	120	0.35%
	Unauthorised	3,742	1.59%	7,566	2.44%	1,748	5.12%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.43: Half days absent by reason for pupil enrolments without autism or aspergers by school type, 2010/11

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		52,123,835	94.90%	39,372,041	92.64 %	1,082,484	89.11 %
Total half days absent		2,801,358	5.10%	3,128,197	7.36%	132,292	10.89 %
Reason for absence	**Illness**	1,650,148	3.00%	1,492,413	3.51%	57,603	4.74%
	Medical/dental	72,679	0.13%	143,588	0.34%	9,042	0.74%
	other exceptional circumstances	209,096	0.38%	192,300	0.45%	20,167	1.66%
	Other authorised	115,874	0.21%	119,705	0.28%	5,812	0.48%
	Unauthorised	753,561	1.37%	1,180,191	2.78%	39,668	3.27%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.44: Half days absent by reason for pupil enrolments with autism by school type, 2011/12

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		450,189	94.24%	216,238	91.55%	378,051	92.29%
Total half days absent		27,497	5.76%	19,958	8.45%	31,570	7.71%
Reason for absence	**Illness**	17,635	3.69%	10,581	4.48%	16,665	4.07%
	Medical/dental	1,505	0.32%	1,093	0.46%	2,137	0.52%
	other exceptional circumstances	1,402	0.29%	1,482	0.63%	3,574	0.87%
	Other authorised	843	0.18%	678	0.29%	1,570	0.38%
	Unauthorised	6,112	1.28%	6,124	2.59%	7,624	1.86%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.45: Half days absent by reason for pupil enrolments with aspergers by school type, 2011/12

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		233,667	93.95%	300,224	92.18%	28,704	88.85%
Total half days absent		15,052	6.05%	25,458	7.82%	3,603	11.15%
Reason for absence	**Illness**	8,963	3.60%	12,945	3.97%	927	2.87%
	Medical/dental	663	0.27%	1,629	0.50%	198	0.61%
	other exceptional circumstances	580	0.23%	1,326	0.41%	317	0.98%
	Other authorised	752	0.30%	1,061	0.33%	168	0.52%
	Unauthorised	4,094	1.65%	8,497	2.61%	1,993	6.17%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.46: Half days absent by reason for pupil enrolments without autism or aspergers by school type, 2011/12

		Primary		Post-primary		Special	
		N	% of total half days	N	% of total half days	N	% of total half days
Total half days present		53,702,384	95.24 %	39,225,891	93.04 %	1,090,747	89.50 %
Total half days absent		2,682,207	4.76%	2,933,282	6.96%	127,968	10.50 %
Reason for absence	**Illness**	1,661,384	2.95%	1,462,219	3.47%	60,089	4.93%
	Medical/dental	75,262	0.13%	153,145	0.36%	9,627	0.79%
	other exceptional circumstances	88,138	0.16%	106,770	0.25%	8,000	0.66%
	Other authorised	110,201	0.20%	115,244	0.27%	5,128	0.42%
	Unauthorised	747,222	1.33%	1,095,904	2.60%	45,124	3.70%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.47: Attendance in half days for primary school pupil enrolments by ELB, 2009/10

	Autism			Aspergers			Without autism or Aspergers		
	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended
BELB	43,930	2,940	93.73%	62,562	4,210	93.69%	7,802,465	515,307	93.80%
WELB	45,140	3,044	93.68%	33,600	2,224	93.79%	9,386,057	550,171	94.46%
NEELB	50,156	2,787	94.74%	43,785	3,072	93.44%	12,311,853	608,468	95.29%
SEELB	125,687	8,667	93.55%	40,040	2,230	94.72%	11,272,038	588,920	95.03%
SELB	86,678	6,692	92.83%	25,567	2,018	92.68%	12,564,318	702318	94.71%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.48: Attendance in half days for post-primary school pupil enrolments by ELB, 2009/10

	Autism			Aspergers			Without autism or Aspergers		
	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended
BELB	5,651	599	90.42%	71,116	5,993	92.23%	7,657,902	627,033	92.43%
WELB	17,499	1,986	89.81%	41,506	3,149	92.95%	7,159,304	606,064	92.20%
NEELB	23,454	1,552	93.79%	39,274	3,203	92.46%	8,954,120	720,589	92.55%
SEELB	37,138	3,664	91.02%	55,697	3,626	93.89%	7,079,696	644,810	91.65%
SELB	49,048	5,121	90.55%	60,548	6,387	90.46%	9,217,768	749,784	92.48%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.49: Attendance in half days for primary school pupil enrolments by ELB, 2010/11

	Autism			Aspergers			Without autism or Aspergers		
	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended
BELB	53,741	3,346	94.14%	63,256	4,280	93.66%	7,544,886	490,280	93.90%
WELB	52,377	3,421	93.87%	32,799	1,949	94.39%	9,173,151	510,505	94.73%
NEELB	53,864	2,949	94.81%	49,432	3,714	93.01%	12,029,661	576,831	95.42%
SEELB	140,097	9,759	93.49%	50,066	3,201	93.99%	10,868,228	552,346	95.16%
SELB	80,925	5,980	93.12%	24,220	1,942	92.58%	12,507,909	671,396	94.91%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.50: Attendance in half days for post-primary school pupil enrolments by ELB, 2010/11

	Autism			Aspergers			Without autism or Aspergers		
	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended
BELB	10,033	915	91.64%	77,245	5,738	93.09%	7,537,827	587,253	92.77%
WELB	23,773	2,627	90.05%	44,904	3,473	92.82%	6,998,600	576,377	92.39%
NEELB	29,858	1,736	94.51%	51,423	4,348	92.20%	8,872,650	682,487	92.86%
SEELB	54,645	4,953	91.69%	60,809	4,321	93.37%	6,910,631	583,026	92.22%
SELB	60,108	6,640	90.05%	53,256	4,853	91.65%	9,052,333	699,054	92.83%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.51: Attendance in half days for primary school pupil enrolments by ELB, 2011/12

	Autism			Aspergers			Without autism or Aspergers		
	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended
BELB	67,467	4,321	93.98%	69,081	4,269	94.18%	7,790,557	475,745	94.24%
WELB	63,560	3,809	94.35%	29,633	1,665	94.68%	9,328,226	467,834	95.22%
NEELB	59,730	3,074	95.11%	56,787	4,562	92.56%	12,285,512	558,569	95.65%
SEELB	174,137	10,456	94.34%	55,533	3,076	94.75%	11,299,248	542,413	95.42%
SELB	85,295	5,837	93.60%	22,633	1,480	93.86%	12,998,841	637,646	95.32%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.52: Attendance in half days for post-primary school pupil enrolments by ELB, 2011/12

	Autism			Aspergers			Without autism or Aspergers		
	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended	Total attended	Total not attended	% attended
BELB	16,551	1,451	91.94%	83,804	6,695	92.60%	7,497,768	546,344	93.21%
WELB	28,524	2,929	90.69%	47,128	3,283	93.49%	6,944,695	542,725	92.75%
NEELB	40,558	2,688	93.78%	65,025	6,329	91.13%	8,847,564	647,810	93.18%
SEELB	70,045	6,779	91.18%	54,877	3,754	93.60%	6,873,402	538,936	92.73%
SELB	60,560	6,111	90.83%	49,390	5,397	90.15%	9,062,462	657,467	93.24%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.53 Number of pupil enrolments by absence band and school type, 2009/10

	Primary						Post primary					
	Autism		Aspergers		Without Aspergers or autism		Autism		Aspergers		Without Aspergers or autism	
None	57	5.47%	45	7.36%	10,208	6.53%	26	6.47%	56	6.98%	5,618	4.71%
0.5-5.0 days	297	28.48%	162	26.51%	54,547	34.91%	95	23.63%	227	28.30%	31,416	26.33%
5.5-10.0 days	244	23.39%	141	23.08%	39,936	25.56%	77	19.15%	159	19.83%	27,379	22.94%
10.5-15.0 days	184	17.64%	104	17.02%	22,733	14.55%	64	15.92%	127	15.84%	18,482	15.49%
15.5-20.0 days	95	9.11%	67	10.97%	12,470	7.98%	42	10.45%	76	9.48%	11,939	10.01%
20.5-25.0 days	72	6.90%	42	6.87%	6,831	4.37%	30	7.46%	59	7.36%	7,563	6.34%
>25.0 days	94	9.01%	50	8.18%	9,527	6.10%	68	16.92%	98	12.22%	16,929	14.19%
total	1,043	100.00%	611	100.00%	156,252	100.00%	402	100.00%	802	100.00%	119,326	100.00%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.54: Number of pupil enrolments by absence band and school type, 2010/11

	Primary						Post primary					
	Autism		Aspergers		Without Aspergers or autism		Autism		Aspergers		Without Aspergers or autism	
None	56	4.87%	36	5.39%	10,435	6.71%	39	7.13%	57	6.59%	6,051	5.11%
0.5-5.0 days	334	29.04%	206	30.84%	57,511	37.00%	143	26.14%	258	29.83%	33,727	28.47%
5.5-10.0 days	298	25.91%	167	25.00%	39,945	25.70%	118	21.57%	188	21.73%	27,574	23.27%
10.5-15.0 days	184	16.00%	112	16.77%	21,655	13.93%	75	13.71%	125	14.45%	17,948	15.15%
15.5-20.0 days	115	10.00%	53	7.93%	11,417	7.35%	48	8.78%	83	9.60%	11,028	9.31%
20.5-25.0 days	67	5.83%	34	5.09%	6,194	3.99%	35	6.40%	47	5.43%	6,937	5.86%
>25.0 days	96	8.35%	60	8.98%	8,268	5.32%	89	16.27%	107	12.37%	15,208	12.84%
total	1,150	100.00%	668	100.00%	155,425	100.00%	547	100.00%	865	100.00%	118,473	100.00%

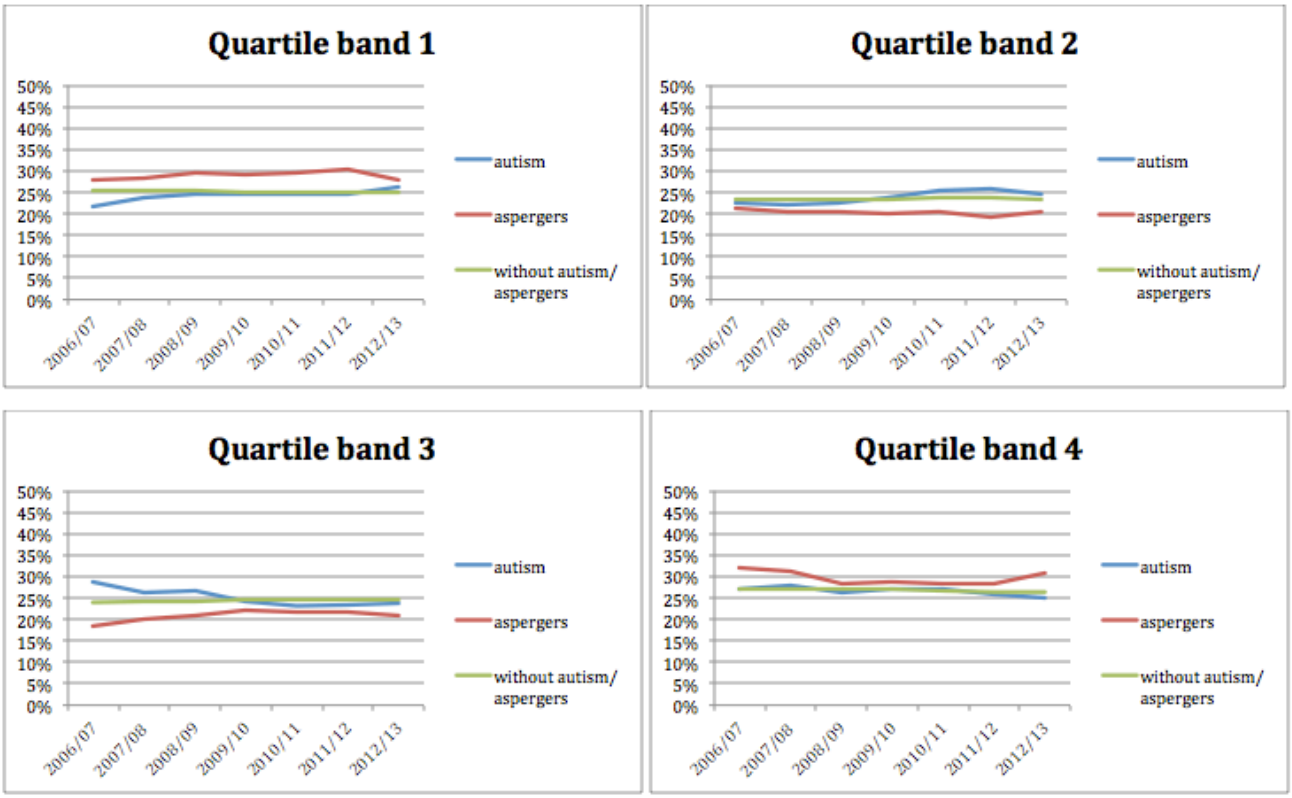
Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

Appendix 2.55: Number of pupil enrolments by absence band and school type, 2011/12

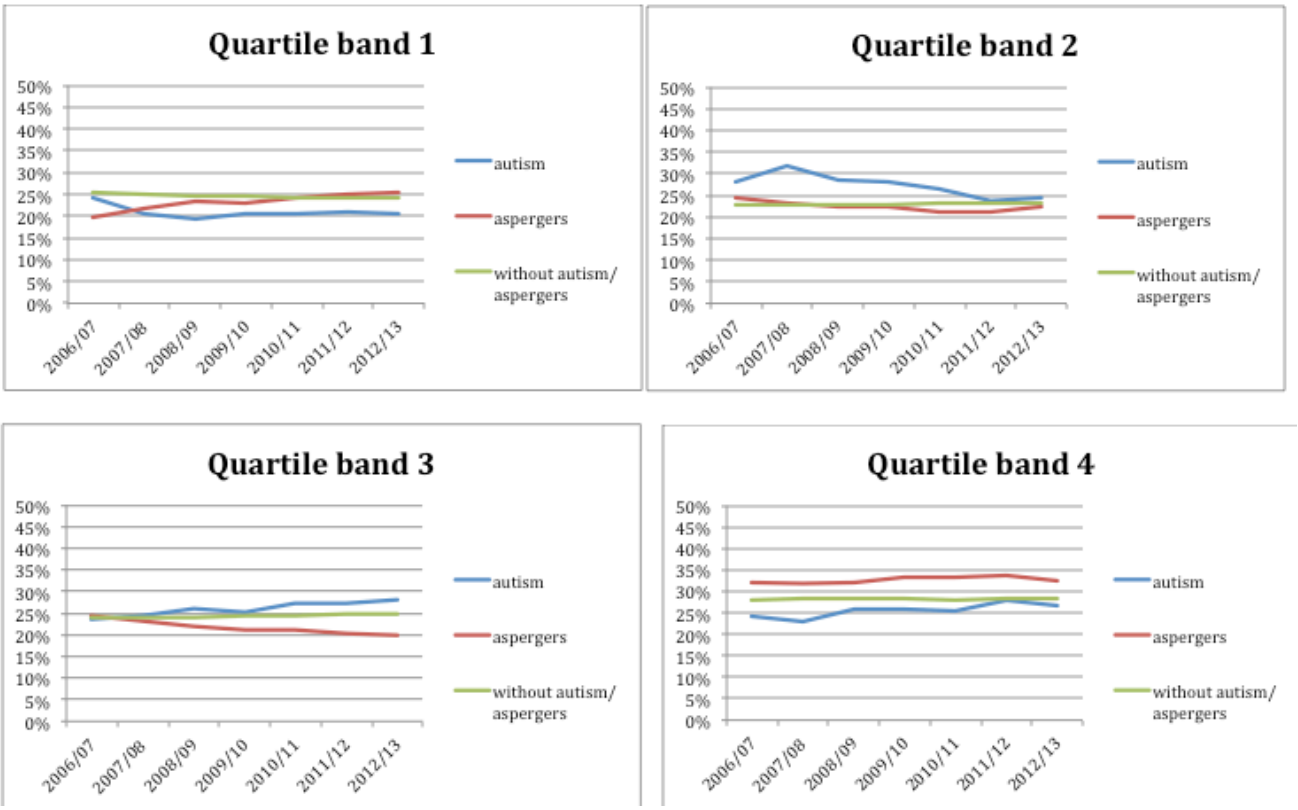
	Primary						Post primary					
	Autism		Aspergers		Without Aspergers or autism		Autism		Aspergers		Without Aspergers or autism	
None	76	5.68%	40	5.79%	12,612	8.03%	45	6.91%	72	7.86%	6,832	5.85%
0.5-5.0 days	426	31.84%	234	33.86%	60,741	38.66%	200	30.72%	259	28.28%	35,184	30.11%
5.5-10.0 days	348	26.01%	145	20.98%	38,959	24.79%	122	18.74%	195	21.29%	26,868	22.99%
10.5-15.0 days	195	14.57%	105	15.20%	20,463	13.02%	87	13.36%	127	13.86%	17,175	14.70%
15.5-20.0 days	110	8.22%	68	9.84%	10,719	6.82%	54	8.29%	73	7.97%	10,502	8.99%
20.5-25.0 days	84	6.28%	47	6.80%	5,878	3.74%	33	5.07%	55	6.00%	6,483	5.55%
>25.0 days	99	7.40%	52	7.53%	7,763	4.94%	110	16.90%	135	14.74%	13,820	11.83%
total	1,338	100.00%	691	100.00%	157,135	100.00%	651	100.00%	916	100.00%	116,864	100.00%

Notes. Figures for primary schools include Years 1 - 7 while post-primary includes Years 8 - 12. Special school figures include all enrolments. It was not possible to include attendance data for 9 primary schools which had either closed or did not yet collect data at pupil level. Pupil level information refers to the number of pupil enrolments rather than the number of pupils. A pupil can move schools during the year and will therefore have an attendance record at more than one school. Although the need type was matched using census data, the figures in terms of pupil numbers will not exactly reflect those from the school census for all the reasons outlined above.

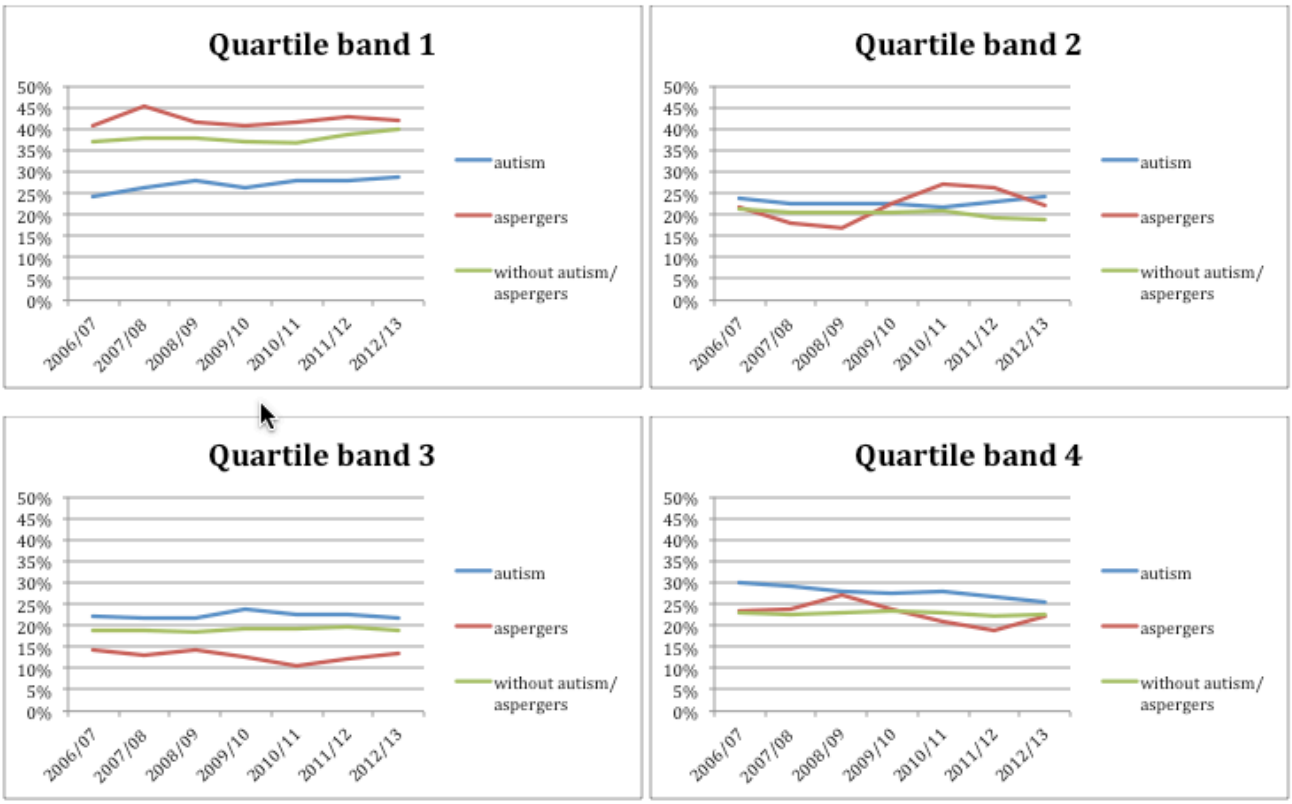
Appendix 2.56: Primary (mainstream) school children in mainstream education by quartile band



Appendix 2.57: Post-primary (mainstream) school children in mainstream education by quartile band



Appendix 2.58: Special school children in by quartile band



YPBAS Appendices 3.1 – 3.9

Appendix 3.1: Autism prevalence question

A12. In the last 12 months, which, if any, of the following conditions/disorders have you had? (Tick all that apply)

Acne, Allergies/rashes, Chest infection (e.g. bronchitis), Asthma, Epilepsy, Diabetes, Migraine, Eating disorder (e.g. anorexia, bulimia), Depression/anxiety, Autism (ASD)

None of the above

Appendix 3.2: Fathers employment status question

Does your father have a job at the moment?

(Tick one box only)

Yes, has a job/is self employed

No – not working

No – retired

Do not have a father

Don't know

Appendix 3.3: Mothers employment status question

A5. Does your mother have a job at the moment?

(Tick one box only)

Yes, has a job/is self employed

No – not working

No – retired

Do not have a mother

Don't know

Appendix 3.4: Perceptions of social relationships questions

D2. During the last 4 weeks, how good or bad have you felt about the following?

(Tick one box for each line)

	Very Good	Fairly Good	Neither good nor bad	Fairly Bad	Very Bad
Your friendships					
The way you get along with others					
Your ability to be a friend to others					
The way others seem to feel about you					
Your ability to talk with others					

Appendix 3.5: Prevalence of autism (ASD) in children aged 11 to 16 attending secondary/grammar school

		Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
				Lower	Upper	
Frequency	Without autism (ASD)	7,285.09	38.99	7,208.66	7,361.51	7,242
	Autism (ASD)	38.73	6.40	26.18	51.28	41
	Total	7,323.82	38.56	7,248.24	7,399.41	7,283
% of Total	Without autism (ASD)	99.47%	0.09%	99.27%	99.62%	7,242
	Autism (ASD)	0.53%	0.09%	0.38%	0.73%	41
	Total	100.00%	0.00%	100.00%	100.00%	7,283

Appendix 3.6: Proportion of students from NIMDM bands 0-356 and 357-890

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
Without autism (ASD)	Frequency	0-356	2,691.76	42.22	2,608.99	2,774.54	2,996
		357+	4,431.45	53.38	4,326.81	4,536.09	4,063
		Total	7,123.21	36.82	7,051.02	7,195.40	7,059
	% of Total	0-356	37.79%	0.61%	36.61%	38.98%	42.44%
		357+	62.21%	0.61%	61.02%	63.39%	57.56%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
Autism (ASD)	Frequency	0-356	21.40	4.89	11.82	30.98	22
		357+	15.94	4.02	8.05	23.83	17
		Total	37.34	6.32	24.94	49.74	39
	% of Total	0-356	57.31%	8.34%	40.77%	72.37%	56.41%
		357+	42.69%	8.34%	27.63%	59.23%	43.59%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi-square (1,7615) = 5.964, p=.017; Cohen's d = 0.4373, CI(95%) 0.0788 to 0.7957

Appendix 3.7: Employment status for fathers of working age

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
Without autism (ASD)	Frequency	Has a job/self employed	5,897.34	46.72	5,805.75	5,988.92	5,792
		Not working	659.25	25.62	609.03	709.46	701
		Total	6,556.59	42.09	6,474.08	6,639.09	6,493
	% of Total	Has a job/self employed	89.95%	0.39%	89.16%	90.68%	89.20%
		Not working	10.05%	0.39%	9.32%	10.84%	10.80%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
Autism (ASD)	Frequency	Has a job/self employed	31.30	5.84	19.85	42.74	32
		Not working	5.62	2.30	1.11	10.13	7
		Total	36.92	6.27	24.62	49.21	39
	% of Total	Has a job/self employed	84.77%	5.81%	69.73%	93.08%	82.05%
		Not working	15.23%	5.81%	6.92%	30.27%	17.95%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

P=.264 (Fisher's Exact Test). Note, the expected values were too small to use Pearson's Chi-Square.

Appendix 3.8: Employment status for mothers of working age

			Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
					Lower	Upper	
Without autism (ASD)	Frequency	Has a job/self employed	5,075.26	50.13	4,976.99	5,173.54	4,922
		Not working	1,877.21	39.73	1,799.33	1,955.08	1,988
		Total	6,952.47	38.40	6,877.19	7,027.75	6,910
	% of Total	Has a job/self employed	73.00%	0.56%	71.88%	74.09%	71.23%
		Not working	27.00%	0.56%	25.91%	28.12%	28.77%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%
Autism (ASD)	Frequency	Has a job/self employed	26.95	5.44	16.30	37.61	28
		Not working	8.58	2.98	2.73	14.43	9
		Total	35.53	6.20	23.38	47.68	37
	% of Total	Has a job/self employed	75.85%	7.37%	58.80%	87.36%	75.68%
		Not working	24.15%	7.37%	12.64%	41.20%	24.32%
		Total	100.00%	0.00%	100.00%	100.00%	100.00%

Pearson Chi-square (1,7615) = 0.145, p=.710; Cohen's d = 0.0827, CI(95%) -0.3419 to 0.5073

Appendix 3.9: Social relationships scale scores

	Weighted Estimate (mean)	Standard Error	95% Confidence Interval		Unweighted Count
			Lower	Upper	
Without autism (ASD)	8.42	0.04	8.35	8.50	7,052
Autism (ASD)	10.43	0.75	8.96	11.91	40

t (36.659)=2.668, p=.011; Cohen's d=0.4192; CI(95%)=0.0961 to 0.7423.
Cronbachs alpha =.83

School Leavers Survey Appendices 4.1-4.2

Appendix 4.1: Destinations of pupils leaving grant aided mainstream post primary schools: 2008 to 2012

	Autism		Aspergers		Without autism/aspergers	
	Number	%	Number	%	Number	%
Higher Education	18	9.05%	130	22.34%	48,288	41.94%
Further Education	88	44.22%	283	48.63%	37,186	32.30%
Employment	6	3.02%	15	2.58%	8,517	7.40%
Training	74	37.19%	118	20.27%	14,584	12.67%
Unemployment	8	4.02%	19	3.26%	3,973	3.45%
Unknown	5	2.51%	17	2.92%	2,592	2.25%
Total	199	100.00%	582	100.00%	115,140	100.00%

Source: School Leavers Survey. Data excludes special and independent schools

Appendix 4.2: Qualifications of pupils leaving grant aided mainstream post primary schools: 2008 to 2012

	Autism		Aspergers		Without autism/aspergers	
	Number	%	Number	%	Number	%
2+A Levels A*-E	25	12.56%	173	29.73%	59,813	51.95%
5+GCSEs A*-C	66	33.17%	299	51.37%	82,681	71.81%
Did not attain at least at least 5 GCSEs A*-C inc. equivalents	133	66.83%	283	48.63%	32,459	28.19%
Total Leavers	199	100.00%	582	129.73%	115,140	100.00%

Source: School Leavers Survey. Data excludes special and independent schools

Further Education Appendices 5.1 – 5.15

Appendix 5.1: Professional and Technical Enrolments at NI FE Colleges by Education and Library Board (2003/04 - 2011/12)

Education and Library Board	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Belfast	18,355	20,445	23,440	26,225	22,235	21,770	23,705	20,880	19,515
North Eastern	22,550	25,490	26,720	27,875	25,875	24,850	27,845	25,885	26,445
South Eastern	28,965	31,490	31,545	34,455	30,540	32,380	35,965	33,250	33,570
Southern	30,810	33,890	32,175	31,975	33,810	34,150	41,135	40,440	39,765
Western	29,230	29,615	27,615	24,725	24,520	24,855	28,495	28,510	27,910
Unknown Postcode	10,635	7,400	6,695	6,030	5,120	4,480	6,200	6,460	5,875
Total	140,545	148,325	148,190	151,285	142,100	142,485	163,350	155,425	153,075

2008/09 and 2010/11 figures are revised
To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown.

Appendix 5.2: Professional and Technical Enrolments with Autism Spectrum Disorder at NI FE Colleges by Education and Library Board (2003/04 - 2011/12)

Education and Library Board	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Belfast	0	0	10	10	10	85	185	80	100
North Eastern	0	5	5	10	30	60	135	130	140
South Eastern	5	10	45	90	60	90	130	190	330
Southern	0	10	50	90	125	165	265	250	270
Western	0	5	10	15	40	35	80	140	160
Unknown Postcode	0	0	0	0	10	5	15	10	20
Total	10	30	115	220	280	445	805	795	1,020

2008/09 and 2010/11 figures are revised
To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown.

Appendix 5.3: Proportion of Professional and Technical Enrolments with Autism Spectrum Disorder at NI FE Colleges by Education and Library Board (2003/04 - 2011/12)

Education and Library Board	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Belfast	0.00%	0.00%	0.04%	0.04%	0.04%	0.39%	0.78%	0.38%	0.51%
North Eastern	0.00%	0.02%	0.02%	0.04%	0.12%	0.24%	0.48%	0.50%	0.53%
South Eastern	0.02%	0.03%	0.14%	0.26%	0.20%	0.28%	0.36%	0.57%	0.98%
Southern	0.00%	0.03%	0.16%	0.28%	0.37%	0.48%	0.64%	0.62%	0.68%
Western	0.00%	0.02%	0.04%	0.06%	0.16%	0.14%	0.28%	0.49%	0.57%
Unknown Postcode	0.00%	0.00%	0.00%	0.00%	0.20%	0.11%	0.24%	0.15%	0.34%
Total	0.01%	0.02%	0.08%	0.15%	0.20%	0.31%	0.49%	0.51%	0.67%

2008/09 and 2010/11 figures are revised

Appendix 5.4: Professional and Technical Enrolments at NI FE Colleges by Age Group: 2009/10

	2009/10						
	19 & Under		**20 to 24**		**25 & over**		**Total**
Without autism aspergers	81,900	50.39%	20,760	12.77%	59,880	36.84%	162,545
Autism/aspergers	605	75.16%	110	13.66%	95	11.80%	805
Total	82,505	50.51%	20,870	12.78%	59,975	36.72%	163,350

25 years & over age group includes a small number of unknown age (<1%)

To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.

Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.5: Professional and Technical Enrolments at NI FE Colleges by Age Group: 2010/11

	2010/11						
	19 & Under		20 to 24		25 & over[1]		Total
Without autism aspergers	80,270	51.91%	19,485	12.60%	54,875	35.49%	154,630
Autism/aspergers	625	78.62%	110	13.84%	60	7.55%	795
Total	80,895	52.05%	19,595	12.61%	54,935	35.35%	155,425

25 years & over age group includes a small number of unknown age (<1%)
To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.6: Professional and Technical Enrolments at NI FE Colleges by Age Group: 2011/12

	2011/12						
	19 & Under		20 to 24		25 & over[1]		Total
Without autism aspergers	81,350	53.50%	20,115	13.23%	50,590	33.27%	152,055
Autism/aspergers	815	79.90%	120	11.76%	85	8.33%	1,020
Total	82,165	53.68%	20,235	13.22%	50,675	33.10%	153,075

25 years & over age group includes a small number of unknown age (<1%)
To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.7: Professional and Technical Enrolments at NI FE Colleges by NQF Level (or equivalent): 2009/10

	Level 1 and entry		Level 2		Level 3		HE		Total
Without autism aspergers	46,020	28.31%	64,500	39.68%	40,650	25.01%	11,375	7.00%	162,545
Autism/aspergers	320	39.75%	320	39.75%	140	17.39%	25	3.11%	805
Total	46,340	28.37%	64,820	39.68%	40,790	24.97%	11,400	6.98%	163,350

HE = Higher Education and is equivalent to National Qualifications Framework Level 4 and above
To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.8: Professional and Technical Enrolments at NI FE Colleges by NQF Level (or equivalent): 2010/11

	Level 1 and entry		Level 2		Level 3		HE		Total
Without autism aspergers	41,955	27.13%	65,330	42.25%	36,370	23.52%	10,975	7.10%	154,630
Autism/aspergers	295	37.11%	315	39.62%	155	19.50%	30	3.77%	795
Total	42,250	27.18%	65,645	42.24%	36,525	23.50%	11,005	7.08%	155,425

HE = Higher Education and is equivalent to National Qualifications Framework Level 4 and above
To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.9: Professional and Technical Enrolments at NI FE Colleges by NQF Level (or equivalent): 2011/12

	Level 1 and entry		Level 2		Level 3		HE		Total
Without autism aspergers	34,630	22.77%	71,555	47.06%	34,590	22.75%	11,270	7.41%	152,055
Autism/aspergers	375	36.76%	440	43.14%	165	16.18%	45	4.41%	1,020
Total	35,005	22.87%	71,995	47.03%	34,755	22.70%	11,315	7.39%	153,075

HE = Higher Education and is equivalent to National Qualifications Framework Level 4 and above
To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.10: Professional and Technical Enrolments at NI FE Colleges by mode of Attendance: 2009/10

	2009/10				
	Full-time		Part-time		Total
Without autism/aspergers	28,715	17.67%	133,830	82.33%	162,545
Autism/aspergers	185	22.98%	620	77.02%	805
Total	28,900	17.69%	134,450	82.31%	163,350

To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.11: Professional and Technical Enrolments at NI FE Colleges by mode of Attendance: 2010/11

	2010/11				
	Full-time		Part-time		Total
Without autism/aspergers	28,225	18.25%	126,405	81.75%	154,630
autism/aspergers	190	23.90%	605	76.10%	795
Total	28,415	18.28%	127,010	81.72%	155,425

To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.12: Professional and Technical Enrolments at NI FE Colleges by mode of Attendance: 2011/12

	2011/12				
	Full-time		Part-time		Total
Without autism/aspergers	27,680	18.20%	124,380	81.80%	152,055
Autism/aspergers	225	22.06%	795	77.94%	1,020
Total	27,905	18.23%	125,175	81.77%	153,075

To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of row percentages may deviate marginally from 100%

Appendix 5.13: Professional and Technical Enrolments at NI FE Colleges by Subject Area - 2009/10 to 2011/12

Subject Area	Total enrolments		Without autism/aspergers		Autism/aspergers	
Health, Public Services & Care	44,775	9.49%	44,660	9.52%	115	4.39%
Science & Mathematics	21,905	4.64%	21,800	4.65%	105	4.01%
Agriculture, Horticulture & Animal Care	3,705	0.79%	3,695	0.79%	10	0.38%
Engineering & Manufacturing Technologies	33,370	7.07%	33,315	7.10%	55	2.10%
Construction, Planning & the Built Environment	28,095	5.95%	27,990	5.97%	105	4.01%
Information & Communication Technology	38,095	8.07%	37,840	8.06%	255	9.73%
Retail & Commercial Enterprise	42,710	9.05%	42,560	9.07%	150	5.73%
Leisure, Travel & Tourism	17,445	3.70%	17,390	3.71%	55	2.10%
Arts, Media & Publishing	24,840	5.26%	24,590	5.24%	250	9.54%
History, Philosophy & Theology	2,100	0.45%	2,080	0.44%	20	0.76%
Social Sciences	9,935	2.11%	9,860	2.10%	75	2.86%
Languages, Literature & Culture	30,305	6.42%	30,255	6.45%	50	1.91%
Education & Training	104,260	22.10%	103,425	22.04%	835	31.87%
Preparation for Life & Work	38,255	8.11%	37,805	8.06%	450	17.18%
Business, Administration & Law	32,065	6.80%	31,970	6.81%	95	3.63%
Total	471,850	100.00%	469,230	100.00%	2,620	100.00%

To prevent the identification of individuals, figures in the tables are rounded to the nearest 5, with 0, 1, 2 rounded to 0.
Due to rounding the sum of numbers in each row or column may not match the total shown, and the sum of column percentages may deviate marginally from 100%

Appendix 5.14: Retention rates for final year enrolments at FE colleges in NI onto professional and technical courses: 2010/11 to 2011/12

	2010/11			2011/12		
	Final year enrolments	**Final year completers**	**Retention rate**	**Final year enrolments**	**Final year completers**	**Retention rate**
Autism/Aspergers	633	567	89.57%	787	708	89.96%
Without Autism/Aspergers	122,131	107,086	87.68%	123,650	109,364	88.45%
Total	122,764	107,653	87.69%	124,437	110,072	88.46%

Transfers are excluded from this analysis
Final Year Completers are defined as final year enrolments which do not have a student status of withdrawn or transferred.
In 2010/11 there were 8 final year enrolments by students with autism/aspergers where Education and Library Board was unknown. These have been excluded from Table 1.
In 2011/12 there were 21 final year enrolments by students with autism/aspergers where Education and Library Board was unknown. These have been

Appendix 5.15: Achievement rates for final year completers at FE colleges in NI of professional and technical courses: 2010/11 to 2011/12

	2010/11			2011/12		
	Final year completers	**Final year achievements**	**Achievement rate**	**Final year completers**	**Final year achievements**	**Achievement rate**
Autism/Aspergers	567	451	79.54%	708	590	83.33%
Without Autism/Aspergers	107,086	85,966	80.28%	109,364	92,094	84.21%
Total	107,653	86,417	80.27%	110,072	92,684	84.20%

Transfers are excluded from this analysis
Final Year Completers are defined as final year enrolments which do not have a student status of withdrawn or transferred.
Achievements are defined as full and partial achievements within outcome for those classed as final year completers.
In 2010/11 there were 8 final year enrolments by students with autism/aspergers where Education and Library Board was unknown. These have been excluded from Table 1.
In 2011/12 there were 21 final year enrolments by students with autism/aspergers where Education and Library Board was unknown. These have been

Appendix 5.16: Professional and technical enrolments with autism spectrum disorder at NI FE colleges by gender (2003/04 2011/12)

Academic Year	Gender					
	Female		Male		Total	
2003/04	0	0.00%	10	100.00%	10	100.00%
2004/05	5	16.67%	25	83.33%	30	100.00%
2005/06	10	8.70%	105	91.30%	115	100.00%
2006/07	60	27.27%	165	75.00%	220	100.00%
2007/08	60	21.43%	220	78.57%	280	100.00%
2008/09	125	28.09%	320	71.91%	445	100.00%
2009/10	250	31.06%	560	69.57%	805	100.00%
2010/11	180	22.64%	615	77.36%	795	100.00%
2011/12	195	19.12%	825	80.88%	1020	100.00%

Higher education Appendices 6.1 – 6.6

Appendix 6.1: Percentage of HEI enrolments by students with autism/aspergers in NI and GB: 2010/11-2011/12.

	2010/11			2011/12		
	Autism	**Total**	**%**	**Autism**	**Total**	**%**
GB HEIs	3,265	2,449,295	0.13%	4,215	2,444,735	0.17%
NI HEIs	145	52,000	0.28%	235	51,905	0.45%

Note: Figures are rounded to the nearest 5.

Appendix 6.2: Enrolments at NI HEIs by Country of Domicile: 2010/11-2011/12

Country of domicile	**2010/11**						**2011/12**					
	Total enrolments		**Without autism /aspergers**		**Autism/ aspergers**		**Total enrolments**		**Without autism/aspergers**		**Autism/ aspergers**	
NI	43,960	84.54%	43,830	84.52%	130	89.66%	43,260	83.34%	43,050	83.32%	210	89.36%
GB	1,445	2.78%	1,440	2.78%	5	3.45%	1,825	3.52%	1,815	3.51%	10	4.26%
ROI	4,285	8.24%	4,280	8.25%	5	3.45%	3,520	6.78%	3,510	6.79%	10	4.26%
Other EU	370	0.71%	370	0.71%	0	0.00%	355	0.68%	355	0.69%	0	0.00%
Other OverSeas	1,945	3.74%	1,940	3.74%	5	3.45%	2,950	5.68%	2,945	5.70%	5	2.13%
Total	52,000	100.0%	51,855	100.0%	145	100.0%	51,905	100.0%	51,670	100.0%	235	100.0%

Note: Figures are rounded to the nearest 5. Due to rounding columns may not sum to totals

Appendix 6.3: Enrolments of NI domiciles by country of institution: 2010/11-2011/12

Country of institution	**2010/11**						**2011/12**					
	Total enrolments		**Without autism/ aspergers**		**Autism/ aspergers**		**Total enrolments**		**Without autism/ aspergers**		**Autism/ aspergers**	
England	16,555	25.25%	16,540	25.29%	15	9.68%	17,320	26.41%	17,300	26.47%	20	8.33%
NI	43,960	67.06%	43,830	67.02%	130	83.87%	43,260	65.96%	43,050	65.88%	210	87.50%
Scotland	4,520	6.89%	4,510	6.90%	10	6.45%	4,440	6.77%	4,430	6.78%	10	4.17%
Wales	515	0.79%	515	0.79%	0	0.00%	570	0.87%	570	0.87%	0	0.00%
Total	65,555	100.0%	65,400	100.0%	155	100.0%	65,590	100.0%	65,350	100.0%	240	100.0%

Note: Figures are rounded to the nearest 5. Due to rounding columns may not sum to totals

Appendix 6.4: Percentage of NI higher Education enrolments by subject area: 2010/11-2011/12

Subject	Total enrolments		Without autism/aspergers		Autism/aspergers	
Medicine & dentistry	3,950	3.80%	3,935	3.80%	15	3.95%
Subjects allied to medicine	15,845	15.25%	15,740	15.20%	105	27.63%
Biological sciences	6,130	5.90%	6,115	5.91%	15	3.95%
Veterinary science	0	0.00%	0	0.00%	0	0.00%
Agriculture & related subjects	890	0.86%	890	0.86%	0	0.00%
Physical sciences	3,270	3.15%	3,255	3.14%	15	3.95%
Mathematical sciences	725	0.70%	720	0.70%	5	1.32%
Computer science	5,445	5.24%	5,415	5.23%	30	7.89%
Engineering & technology	6,495	6.25%	6,470	6.25%	25	6.58%
Architecture, building & planning	4,485	4.32%	4,470	4.32%	15	3.95%
Social studies	8,980	8.64%	8,945	8.64%	35	9.21%
Law	4,440	4.27%	4,420	4.27%	20	5.26%
Business & administrative studies	17,270	16.62%	17,255	16.67%	15	3.95%
Mass communications & documentation	2,190	2.11%	2,175	2.10%	15	3.95%
Languages	4,005	3.85%	4,000	3.86%	5	1.32%
Historical & philosophical studies	2,825	2.72%	2,810	2.71%	15	3.95%
Creative arts & design	4,300	4.14%	4,290	4.14%	10	2.63%
Education	12,070	11.62%	12,045	11.63%	25	6.58%
Combined	600	0.58%	595	0.57%	5	1.32%
Total	103,910	100.00%	103,530	100.00%	380	100.00%

Note: Figures are rounded to the nearest 5. Due to rounding columns may not sum to totals

Appendix 6.5: Percentage of GB higher Education enrolments by subject area: 2010/11-2011/12

Subject	Total enrolments		Without autism/aspergers		Autism/aspergers	
Medicine & dentistry	130,845	2.67%	130,820	2.68%	25	0.33%
Subjects allied to medicine	583,895	11.93%	583,675	11.94%	220	2.94%
Biological sciences	383,185	7.83%	382,740	7.83%	445	5.95%
Veterinary science	11,110	0.23%	11,100	0.23%	10	0.13%
Agriculture & related subjects	41,065	0.84%	40,975	0.84%	90	1.20%
Physical sciences	185,270	3.79%	184,650	3.78%	620	8.29%
Mathematical sciences	83,550	1.71%	83,205	1.70%	345	4.61%
Computer science	189,245	3.87%	188,115	3.85%	1,130	15.11%
Engineering & technology	316,405	6.47%	315,850	6.46%	555	7.42%
Architecture, building & planning	116,650	2.38%	116,560	2.39%	90	1.20%
Social studies	431,525	8.82%	431,095	8.82%	430	5.75%
Law	182,085	3.72%	181,925	3.72%	160	2.14%
Business & administrative studies	704,885	14.40%	704,485	14.42%	400	5.35%
Mass communications & documentation	106,355	2.17%	106,020	2.17%	335	4.48%
Languages	266,700	5.45%	266,220	5.45%	480	6.42%
Historical & philosophical studies	193,100	3.95%	192,520	3.94%	580	7.75%
Creative arts & design	354,480	7.24%	353,285	7.23%	1,195	15.98%
Education	413,385	8.45%	413,195	8.46%	190	2.54%
Combined	200,295	4.09%	200,115	4.10%	180	2.41%
Total	4,894,030	100.00%	4,886,550	100.00%	7,480	100.00%

Note: Figures are rounded to the nearest 5. Due to rounding columns may not sum to totals

Appendix 6.6: Qualifiers from NI HEIs with ASD or A social/communication impairment such as Asperger's syndrome/other autistic spectrum disorder 2010/11 - 2011/12

	2010/11	2011/12
Qualifier with autism/aspergers	35	50
Total qualifiers	14,960	16,100
%	0.23%	0.31%

Note: Figures are rounded to the nearest 5.

Multiple Exclusion Homelessness Survey Appendix 7

Appendix 7: Question used to identify individuals with autism

Do you have any of the health problems or disabilities listed on this card? - Autism (all references to autism spectrum)

Response options:

1. A. Problems or disability connected with: arms, legs, hands, feet back, or neck (including arthritis and rheumatism)

2. B. Difficulty in seeing (other than needing glasses to read normal size print)

3. C. Difficulty in hearing

4. D. Skin conditions/allergies

5. E. Chest/breathing problems, asthma, bronchitis

6. F. Heart/high blood pressure or blood circulation problems

7. G. Stomach/liver/kidneys or digestive problems

8. H. Diabetes

9. I. Anxiety, depression or bad nerves, psychiatric problems

10. J. Alcohol or drug related problems

11. K. Epilepsy

12. L. Migraine or frequent headaches

13. M. Cancer

14. N. Stroke.

15. O. Other health problems (PLEASE GIVE DETAILS)

None

Don’t know

Refused

NILTS 2003 and 2012 Appendices 8.1 –8.4

Appendix 8.1: NILT 2003 question: How concerned or unconcerned would you be if there was an autistic child in the same class at school as your own child?

PROMPT: Say you had children at school SHOWCARD Very concerned	1
A bit concerned	2
Unconcerned	3
(Other – write in)	4
(Don't know)	8

Appendix 8.2: NILT 2012 question: And thinking about a child with autism, would you be comfortable or uncomfortable
if... ... a child with autism was in class with a child from your own family
1) Comfortable
2) Comfortable, but only if they were high functioning
3) Uncomfortable
8) Don't know

Appendix 8.3: How concerned or unconcerned would you be if there was an autistic child in the same class at school as your own child?

		Weighted Estimate	Standard Error	95% Confidence Interval		Unweighted Count
				Lower	Upper	
Frequency	Very concerned	40.58	6.07	28.68	52.49	51
	Just a bit concerned	375.00	18.99	337.75	412.25	388
	Unconcerned	1,275.51	26.69	1,223.17	1,327.86	1,239
	Other (Please Specify)	13.36	3.76	5.98	20.74	15
	(Don't know)	95.55	10.24	75.47	115.62	107
	Total	1,800.00	20.40	1,759.98	1,840.02	1,800
% of Total	Very concerned	2.25%	0.34%	1.68%	3.02%	2.83%
	Just a bit concerned	20.83%	1.04%	18.86%	22.95%	21.56%
	Unconcerned	70.86%	1.16%	68.53%	73.09%	68.83%
	Other (Please Specify)	0.74%	0.21%	0.43%	1.29%	0.83%
	(Don't know)	5.31%	0.57%	4.30%	6.54%	5.94%
	Total	100.00%	0.00%	100.00%	100.00%	100.00%

Appendix 8.4: Would you be comfortable or uncomfortable if a child with autism was in class with a child from your own family?

		Estimate	Standard Error	95% Confidence Interval		Unweighted Figures
				Lower	Upper	
Frequency	Comfortable	885.23	20.80	844.42	926.04	867
	Comfortable, but only if they were high functioning	40.46	6.78	27.17	53.76	42
	Uncomfortable	14.22	4.00	6.37	22.06	15
	Don't know	24.06	5.20	13.85	34.26	24
	Total	963.97	20.06	924.60	1003.33	948
% of Total	Comfortable	91.83%	0.95%	89.76%	93.51%	91.46%
	Comfortable, but only if they were high functioning	4.20%	0.70%	3.02%	5.80%	4.43%
	Uncomfortable	1.47%	0.41%	0.85%	2.55%	1.58%
	Don't know	2.50%	0.54%	1.63%	3.80%	2.53%
	Total	100.00%	0.00%	100.00%	100.00%	100.00%